The Licensing of Negative Sensitive Items in Jordanian Arabic

By

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Abstract

This study investigates the licensing conditions on Negative Sensitive Items (NSIs) in Jordanian Arabic (JA). JA exhibits both types of NSIs that are discussed in the literature: Negative Polarity Items (NPIs) and Negative Concord Items (NCIs). Although these two sets of items seem to form a natural class in the sense that they show certain sensitivity to negation, they display important distributional differences that call for different analyses. First, NCIs can sometimes express negation on their own as in fragment answers; whereas NPIs cannot do so. Second, the licensing of NCIs is clause-bound; whereas the licensing of NPIs is not. Third, NPIs are acceptable in a number of contexts that do not involve overt negation; whereas NCIs are acceptable in only a subset of these contexts, namely *without*-clauses and *before*-clauses.

The licensing of NPIs and NCIs in JA is discussed in light of previous theories that are mainly based on the distribution of these items in English and European languages. The investigation of NPI licensing in JA shows that the distribution of these items can best be captured by the semantic notion of (Non-)veridicality (Giannakidou 1998, 1999, 2000, 2002, 2006, 2011). Data from JA show that NPIs in the language need to be in the c-command domain of a non-veridical function at LF as proposed by the (Non)-veridicality Approach.

The investigation of NCI licensing in JA shows that none of the NCI licensing theories previously proposed in the literature extends to JA. Alternatively, an account is proposed that is basically a crucial modification of the Non-negative Indefinites Approach (Zeijlstra 2004, 2008; Penka 2007, 2011) which takes Negative Concord to be a manifestation of syntactic agreement between an NCI and a semantic negation in the clause, where syntactic agreement is defined in terms of feature checking following recent assumptions within Minimalism (Chomsky 1995, 1998, 2000, 2001). I argue that NCIs are non-negative indefinites that are endowed with an

[uNEG]-feature that needs to be checked against an [iNEG]-feature of a semantic negation that can be either overt or abstract in the clause. I also propose that Spec-head agreement and Head-complement agreement exist side by side with c-command as licensing configurations for NCIs. I further argue that the level of representation at which NCI licensing takes place is not the same among all NCIs: while some NCIs are licensed at LF, other NCIs are licensed in the surface syntax. I show that this alternative account can capture the distribution of NCIs in JA. I also show that this account extends to NCIs in other languages such as Moroccan Arabic, Polish, and Spanish and is thus supported cross-linguistically.

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List of Abbreviations and Symbols:

JA	=	Jordanian Arabic
NSI	=	Negative Sensitive Item
NPI	=	Negative Polarity Item
NCI	=	Negative Concord Item
NC	=	Negative Concord
NEG	=	Negative marker
1	=	First person
2	=	Second person
3	=	Third person
M	=	masculine
F	=	feminine
S	=	singular
P	=	Plural
NOM	=	Nominative
ACC	=	Accusative
GEN	=	Genitive
IND	=	Indicative
SUBJ	=	Subjunctive
*	=	The sentence is ungrammatical
*(…)	=	The sentence is ungrammatical with the absence of the parenthesized expression
(*…)	=	The sentence is ungrammatical with the presence of the parenthesized expression
DET	=	Determiner
e	=	Event variable
∃	=	Existential quantifier
∀	=	Universal quantifier
¬	=	Negative operator
S	=	Subject
V	=	Verb
O	=	Object
VP	=	Verb phrase
NP	=	Noun phrase
DP	=	Determiner phrase
PP	=	Prepositional phrase
AdjP	=	Adjective phrase
NegP	=	Negative phrase
TP	=	Tense phrase
FP	=	Focus phrase
TopP	=	Topic phrase
CP	=	Complementizer phrase
IP	=	Inflection phrase
Spec	=	Specifier
PF	=	Phonetic form
LF	=	Logical form

List of Phonetic Symbols

1. Consonants

Symbol	*Description*	*Symbol*	*Description*
ʔ	Voiced Glottal stop	s	Voiceless alveolar fricative
b	Voiced bilabial stop	ṣ	Voiceless alveolar emphatic fricative
t	Voiceless dental stop	z	Voiced alveolar fricative
ṭ	Voiceless dental emphatic stop	ʃ	Voiceless post-alveolar fricative
d	Voiced dental stop	ʒ	Voiced post-alveolar fricative
ḍ	Voiced dental emphatic stop	x	Voiceless uvular fricative
k	Voiceless velar stop	ɣ	Voiced uvular fricative
g	Voiced velar stop	ħ	Voiceless pharyngeal fricative
q	Voiceless uvular stop	ʕ	Voiced pharyngeal fricative
m	Voiced bilabial nasal	h	Voiceless glottal fricative
n	Voiced alveolar nasal	t͡ʃ	Voiceless post-alveolar affricate
r	Voiced alveolar trill	d͡ʒ	Voiced post-alveolar affricate
f	Voiceless labio-dental fricative	y	Voiced palatal approximant
θ	Voiceless dental fricative	w	Voiced labio-velar approximant
ð	Voiced dental fricative	l	Voiced alveolar lateral

2. Vowels

Sound	*Description*
i	High front unrounded short
ī	High front unrounded long
u	High back rounded short
ū	High back rounded long
e	Mid front unrounded short
ē	Mid front unrounded long
o	Mid back rounded short
ō	Mid back rounded long
ə	Mid central unrounded
a	Low front unrounded short
ā	Low front unrounded long

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Chapter One

Introduction

The study of negation in natural language has been a central topic in linguistics for centuries. Negation has proven to be one of the core questions in syntactic and semantic theories. Negation is present in every language, and it intriguingly interacts with many other linguistic phenomena. The study of negation in natural language has evolved around different questions, of which even the most basic question of the nature of negation has not been settled yet. The task of identifying what would count as a negative proposition is not as easy as it might seem. In fact, there has been much dispute among philosophers and linguists as to what would count as a negative proposition as opposed to an affirmative proposition. This long-standing dispute has not come to a precise characterization of the nature of negative propositions as Horn (1989: 30) concludes:

> 'Twenty-five centuries of dispute over the nature of negative propositions-what is the relation between negation and affirmation? What is the canonical form of negative propositions, and what existential (and other) inferences can be drawn from them? How many different forms of negation must be countenanced?-have not settled the most basic question of all: just what is a negative proposition, and how can we tell?'

Horn (1989) discusses in detail the confusion that has emerged through the centuries regarding the distinction between negative and positive propositions. One example that he cites is (1) below in which sentence (1a) is considered as a positive proposition while sentence (1b) is considered as a negative proposition although both sentences are semantically equivalent.

(1) a. He's staying.

b. He's not leaving.

(English: Kissin 1969: 5; cited in Horn 1989: 34)

For the purposes of the current study and in order to avoid confusion regarding what to count as a negative proposition, I will consider a negative proposition to be any sentence that translates into predicate logic with the negative operator ¬. For example, for the two semantically equivalent sentences in (1) above, I consider only sentence (1b) as a negative proposition as this sentence translates into predicate logic with the negative operator ¬; whereas sentence (1a) does not as shown below.

(2) a. He's staying.
∃*e* [AGENT (x, *e*) & staying(*e*)]

b. He's not leaving.
¬∃*e* [AGENT (x, *e*) & leaving(*e*)]

Another problem that arises in the study of negative propositions is the distinction between sentential negation and constituent negation. Consider the following sentences:

(3) a. John didn't kiss Mary.
¬∃*e* [AGENT (x, *e*) & THEME (Mary, *e*) & kiss(*e*)]

b. There was some rain not long ago.
∃*e* [some rain(*e*) & ¬TIME (long ago, *e*)]

(English: Penka 2011: 7)

Sentence (3a) is an example of sentential negation; whereas sentence (3b) is an example of constituent negation. Following Penka (2011), I will consider the distinction between sentential negation and constituent negation as one of scope. Sentential negation is negation that takes scope above the event expressed by the verb as shown in the following definition from Penka (2011: 8):

(4) Sentential negation:

Negation taking scope at least above (the existential quantifier binding the event argument of) the main predicate.

The current study mainly focuses on the distribution and licensing conditions of Negative Sensitive Items (NSIs) in Jordanian Arabic (JA). NSIs are expressions that are sensitive to the polarity properties of the structure where they occur. These expressions can only occur in negative contexts. The most well-known example of NSIs is the determiner *any* in English as shown in the following example:

(5) John did *(not) eat **any** apples.

This sentence is only grammatical with the presence of the sentential negative marker *not*. This is because the determiner *any* is an NSI and thus it is excluded from positive sentences.

Besides sentential negation, NSIs can also be felicitous in some negative-like contexts (i.e. contexts that are in some sense negative although they do not involve a sentential negative marker), such as questions (6a), the protasis of conditionals (6b), the complement of adversative predicates (6c), the restrictor of universal quantifiers (6d), *without*-clauses (6e), and *before*-clauses (6f):

(6) a. When did John eat **any** potatoes?

b. If John ate **any** potatoes, he wouldn't be hungry.

c. I doubt that John ate **any** potatoes.

d. Everyone who ate **any** potatoes will not again eat until supper.

e. John left without eating **any** potatoes.

f. John left before eating **any** potatoes.

For ease of reference, I provide a definition of NSIs in (7) below:

(7) Negative Sensitive Items (NSIs):

Elements that can only occur in negative contexts.

NSIs are typologically wide-spread and seem to exist in all languages (Giannakidou 2011). For example, Haspelmath (1997) reports NSIs from 40 languages. In spite of the fact that NSIs seem to form a natural class in the sense that they uniformly display a certain affinity to negation, they have also been shown to display some peculiarities that would argue against a unified analysis of these items. Among the most important distinctions is what can be referred to as the negative-fragment-answer-diagnostic. The negative-fragment-answer-diagnostic refers to the ability of some NSIs to express predicate negation on their own in fragment answers (Laka 1990; Zanuttini 1991; Haegeman 1995; Haegeman and Zanuttini 1991, 1996; Bernini and Ramat 1996; Haspelmath 1997; Herburger 2001; Giannakidou 1998, 2000, 2006; Zeijlstra 2004; Hoyt 2010; Penka 2011; among others). This point can be illustrated by the following contrast between the NSIs *nadie* and *un alma* in Spanish (8), and the contrast between the NSIs *nessuno* and *alcuno* in Italian (9):

(8) A: ¿A quién viste?
to who saw.2SG
'Who did you see?'

B: A **Nadie**.
to nobody
'Nobody.'

B': *A **un alma**.
to a soul
'A soul.'

(Spanish: Herburger, 2001: 300)

(9) A: Chi hai visto?
who have.2SG seen
'Who have you seen?'

B: **Nessuno**.
nobody
'Nobody.'

B': ***Alcuno**.
anybody
'Anybody.'

(Italian: Zanuttini, 1991: 116)

The expressions *nadie* and *un alma* are NSIs in Spanish in the sense that these expressions can only occur in negative contexts in the language. However, the contrast under (8) shows that only the NSI *nadie* can be used to provide a negative fragment answer (8B); whereas the NSI *un alma* cannot do so (8B'). Likewise, the expressions *nessuno* and *alcuno* are NSIs in Italian in the sense that both expressions can only occur in negative contexts in the language. However, the contrast under (9) shows that only the NSI *nessuno* can be used to provide a negative fragment answer (9B), whereas the NSI *alcuno* cannot do so (9B').

This contrast among NSIs gave rise to a distinction between two classes of these items. On one hand, there are NSIs that cannot provide negative fragment answers and thus they cannot contribute negation on their own. These items have been almost consistently referred to as Negative Polarity Items (NPIs). I provide a definition of NPIs in (10) below:

(10) Negative Polarity Items (NPIs):

NSIs that cannot be used to provide negative fragment answers.

One the other hand, there are NSIs that can provide negative fragment answers and thus can contribute negation on their own. These items have been referred to in the literature as n-words

(Laka 1990), negative indefinites (Haspelmath 1997, 2005; de Swart and Sag 2002; Penka 2011), or Negative Concord Items (NCIs) (Watanabe 2004). The term n-word is a theory-neutral term and its sole connotation is that most of the items under question begin with the affix *n-* in European languages. The term negative indefinites is used to capture the idea that these items can contribute both indefinite and negative meaning to the utterance in which they occur. The term NCIs is used to capture the idea that these items participate in what is known as Negative Concord (NC) constructions where two negatives in a sentence contribute one negation to the interpretation as shown in the following example:

(11) Maria **non** ha visto **nessuno**.
Maria NEG has seen nobody
'Maria hasn't seen anybody.'

(Italian: Penka, 2011: 14)

This sentence involves the NSI *nessuno* co-occurring with the sentential negative marker *non*; however, the interpretation involves only one instance of negation. Only the negative marker *non* seems to have contributed negation to the semantics in this sentence; whereas the NSI *nessuno* seems to have failed to do so in spite of the fact that it can contribute negation on its own in other contexts such as fragment answers. NC can be defined as in (12) below:

(12) Negative Concord (NC):

> The failure of a negative constituent to contribute negation to the interpretation when it co-occurs with another negative constituent.

In fact, the term NCI has proven to be a better label with the intended items than the terms n-word and negative indefinite. The term n-word has the implication that all these words carry negative morphology, which is not the case. For example, the n-words *niente* 'anything'

and *nessuno* ‘anybody’ in Italian and *nista* ‘anything’ in Serbian-Croatian carry negative morphology, whereas their counterparts in French and Greek lack negative morphology altogether (Giannakidou 2006). The term negative indefinite has also proven to be lacking as the indefinite meaning and the negative meaning of these items have been questioned in the literature and are still under debate (Penka 2011). The term NCI is not without problems either. The term NCI implies that these items have negative meaning and hence are negative quantifiers, a property that is questioned in the literature (Penka 2011). However, NC has received a novel characterization where NCIs are considered as markers of sentential negation rather than negative quantifiers (Zeijlstra 2004, 2008; Penka 2007, 2011). Consequently, I will refer to these items as NCIs throughout this study. A definition of NCIs is provided in (13) below:

(13) Negative Concord Items (NCIs)

NSIs that can provide negative fragment answers and which do not induce double negation when they co-occur with another negative constituent.

It is important not to confuse NCIs with other negation-related expressions such as NPIs and negative quantifiers. For example, the NPI *any* in English is not to be confused with NCIs because it cannot be used to provide a fragment answer as shown in the following example:

(14) A: Who did you see?

B: *__Anybody__.

The negative-fragment-answer-diagnostic is a well-established test and is widely accepted for identifying NCIs in a given language and for distinguishing them from NPIs (Giannakidou 2000, 2006; Watanabe 2004; Hoyt 2010; Penka 2011):

> 'While NIs [Negative Indefinites (i.e. NCIs)] can be used as short answers to questions, NPIs can never be used in this function. In fact, this contrast between NIs and NPIs is so robust that it can be used as a test to identify whether a given element is an NPI or an n-word [i.e. NCI].'
>
> (Penka 2011: 26)

Likewise, negative quantifiers such as *nobody* in Standard English are also not to be confused with NCIs. Like NCIs, negative quantifiers can provide negative fragment answers as shown in (15) below; however, they retain their negative meaning when they are accompanied by another negative expression resulting in a sentence with a double negation meaning rather than a concordant reading as shown in (16) below:

(15) A: Who did you see?

B: **Nobody**.

(16) I did not see **nobody**. (= I saw everybody.)

The distribution of NSIs has always been a puzzle in linguistic research. Different issues have emerged in the study of NSIs. These include the licenser question, the licensee marking question, the licensing relation question, and the status question (Ladusaw 1996). The licenser question concerns the elements that license NSIs; the licensee marking question concerns the differences between NSIs and other items in the language; the licensing relation question concerns the relation that must hold between the licenser and the licensee; and the status question concerns the status of sentences with unlicensed NSIs. These questions have received extensive research in modern linguistics focusing on the distribution of NSIs in English and European languages.

1.1 Purpose of the Study

The licensing of NSIs has received little attention in Arabic; notable exceptions are Benmamoun (1996, 1997, 2006) and Hoyt (2010). The purpose of this study is to investigate the distribution of NSIs in JA in light of previous theories of NSI licensing. Data from JA shows that the language exhibits both types of NSIs discussed in the literature: NPIs and NCIs. Consider the following examples:

(17) Maryam *(ma)-ħallat **walaw** suʔāl.
Mary NEG-answered.3SF even question.
'Mary did not answer any question.'

(18) Maryam *(ma)-ħallat **wala** suʔāl.[1]
Mary NEG-answered.3SF NCI-DET question
'Mary did not answer any question.'

These examples show that the expressions *walaw* and *wala* are NSIs in JA in the sense that both expressions can only occur in negative contexts. The negative-fragment-answer-diagnostic shows that while the expression *walaw* should be classified as an NPI, the expression *wala* should be classified as an NCI:

(19) A: mīn d͡ʒa?
who came.3S?'
'Who came?'

B: ***walaw** wāħad.
even one.
'Anyone'

[1] From now on, I will gloss NCIs as indicated in this example following the convention in the literature. This is important in order to distinguish NCIs from NPIs and to emphasize the nature of these items as being ambiguous between a negative reading and a non-negative reading.

(20) A: mīn d͡ʒa?
who came.3s?'
'Who came?'

B: **wala** wāḥad.
NCI-DET one.
'No one'

Example (19) shows that the expression *walaw* cannot be used as a fragment answer and hence is an NPI rather than an NCI; whereas example (20) shows that the expression *wala* can be used as a negative fragment answer and hence is an NCI rather than an NPI. Note that the expression *wala* in JA does not contribute negation to the semantics when it is accompanied by a negative marker in sentences like (18) above and thus it should be classified as an NCI rather than a negative quantifier. A review of expressions that function as NPIs and expressions that function as NCIs in JA is provided in Chapter 3.

1.2 Significance of the Study

The significance of this study is twofold. First, most of the previous theories of NSI licensing have focused on the distribution of these items in English and European languages. Attempts to test the hypotheses and implications of these theories in other languages are very rare. This study will attempt to evaluate these hypotheses and implications in light of data from JA, a language of the Semitic family that is typologically different from English and European languages.

Second, the licensing of NSIs has received little attention in Arabic; notable exceptions are Benmamoun (1996, 1997, 2006) and Hoyt (2010). Previous research on NSI licensing in Arabic has important limitations. For example, Benmamoun (1996, 1997, 2006) limits his analysis to a few NSIs in Standard Arabic and, more specifically, Moroccan Arabic, and he entertains only previous syntactic accounts and ignores possible semantic and pragmatic

accounts. We will also see later in this study that Benmamoun does not distinguish between NPIs and NCIs and thus he confuses these two sets of items. Likewise, Hoyt (2010) entertains only NCIs in Levantine Arabic, and ignores NPIs in the language. Thus, to the best of my knowledge, this study will be the first exhaustive research on the licensing of NSIs in a variety of Arabic, namely JA. A call for such a study has recently been made in the literature.

> 'Admittedly, this is [previous accounts of NSI licensing in some varieties of Arabic] highly tentative and would require a more exhaustive analysis of NPIs [NSIs] in Arabic dialects and their distribution.'
>
> (Aoun et al. 2010: 125)

1.3 The Language of the Study

This study mainly focuses on the distribution of NSIs in JA. JA is one of the Levant dialects of Arabic that is spoken in the country Jordan that is located in the east bank of the River Jordan in Western Asia. Typologically, JA belongs to the Semitic language family along with Amharic, Hebrew, Tigrinya, and Aramaic (cf. Comrie 1987). JA exists only as a spoken variety. Jordan, like other Arabic countries, exhibits a diglossic situation with JA as the variety used for informal settings and Standard Arabic as the variety used for formal settings (cf. Ferguson 1959; El-Hassan 1977; Mitchell 1978; among others).

The data presented in the study represent JA as it is spoken by the writer who comes from the province of AlKarak in the south part of Jordan. However, I argue that the assumptions I am making about NSI licensing in this study extend to JA as it is spoken in all parts of Jordan. The data presented in the study were tested with native speakers of JA from different parts of Jordan. In spite of some minor differences at the sound level and the lexical level, all of the informants of the study agreed on the status of these data as being grammatical or ungrammatical as indicated in the study. No differences were found among native speakers of JA from the different

parts of Jordan as far as the purposes of this study are concerned (i.e. as far as NSI licensing in JA is concerned). For instance, one crucial example presented in the study is (21) below where it was important to check whether this example is grammatical only under a double negation reading rather than a concordant reading in JA. All of the native speakers of JA who were involved in the study judged this sentence as being grammatical only under a double negation reading.

(21) a. wala wāħad ma-d͡ʒa.
NCI-DET one NEG-came.3S
'No one did not come.'
*'No one came.'

The total number of the informants of the study is 115 native speakers of JA. These informants come from different parts of Jordan and belong to different gender and age groups as shown in the following table:

Table 1: Informants of the study: demographic information

Age range	Gender	Region			Total
		South (Alkarak, Ma'an, Aqaba)	Center (Amman, Salt)	North (Irbid, Jarash)	
20s	Female	9	6	4	19
	Male	8	5	6	19
30s	Female	11	6	6	23
	Male	13	4	5	22
40s	Female	7	4	3	14
	Male	9	5	4	18

In addition to JA, the study also involves some data from other languages, namely Moroccan Arabic, Polish, and Spanish. These data are used to strengthen some of the arguments presented in the study. Data from Moroccan Arabic, Polish, and Spanish were tested with two native speakers of each language.

1.4 Organization of the Study

The dissertation is organized as follows. Chapter Two explores some aspects of the clause structure of JA that are relevant to the study of NSIs in the language, namely word order and sentential negation. JA exhibits five word order alternations, namely SVO, VSO, OSV, OVS, and SOV. Among these, the OSV, OVS, and SOV word orders require the object to be either resumed by a clitic or to be contrastively focused and are thus considered to be marked word orders as opposed to the unmarked word orders SVO and VSO that do not require such effects on the object. The structure of the unmarked word orders SVO and VSO in Arabic are still a matter of controversy. The structure of the marked word orders can best be captured within the proposals of the Split-CP hypothesis (Rizzi 1997) and the Minimalist Program (Chomsky 1995). The exploration of sentential negation in JA shows that the negative marker heads its own projection above TP in the language, and that it is associated with an uniterpretable [+D] feature that needs to be checked against an interpretable [+D] feature.

Chapter Three reviews expressions that function as NPIs and expressions that function as NCIs in JA. The chapter shows that JA exhibits both NPIs and NCIs. The etymology of NPIs and NCIs in JA show that these elements derive from minimal-unit and maximal-unit expressions that give rise to scalar implications, just like the case in many other languages. This chapter also introduces important distributional differences between NPIs and NCIs in JA. First, NCIs can express negation on their own as is the case in fragment answers; whereas NPIs cannot. Second the licensing of NCIs is clause-bound; whereas the licensing of NPIs is not. Third, NPIs are acceptable in a number of contexts that do not involve a sentential negative marker; whereas NCIs are acceptable in only subset of these contexts, namely *without*-clauses and *before*-clauses.

Chapter Four investigates the licensing of the set of expressions that function as NPIs in JA. NPIs in JA are discussed in light of previous approaches to NPI licensing. Five influential approaches to NPI licensing are discussed and tested against data from JA. These approaches include the Surface Structure Approach (Lasnik 1975; Jackendoff 1969, 1972), the Downward Entailment Approach (Ladusaw 1980, 1982, 1983), the Negative Implicature Approach (Linebarger 1981, 1987), the Binding Approach (Progovac 1988, 1993, 1994), and the (Non-)veridicality Approach (Giannakidou 1998, 1999, 2001, 2002, 2006, 2011). The discussion shows that the (Non)-veridicality Approach fares better than all other approaches in accounting for the distribution of NPIs in JA. Data from JA shows that NPIs in the language need to be in the c-command domain of a non-veridical function at LF as proposed by the (Non)-veridicality Approach.

Chapter Five investigates the licensing of the set of items that function as NCIs in JA. NCIs in JA are discussed in light of previous theories of NCI licensing. Four approaches to NCI licensing are introduced and tested against data from JA. These approaches include the Non-negative NPI Approach (Laka 1990; van der Wouden 1997; Zwarts 1997, 1998; Progovac 1988, 1993, 1994; Giannakidou 1998, 2002, 2006), the Negative Quantifier Approach (Zanuttini 1991; Haegeman and Zanuttini 1991, 1996; Haegeman 1995; de swart and Sag 2002; Watanabe 2004), the Ambiguity Approach (Herburger 2001; Hoyt 2010), and the Non-negative Indefinites Approach (Zeijlstra 2004, 2008; Penka 2007, 2011). The discussion shows that none of these approaches can account for the distribution of NCIs in JA. For this, an alternative account is proposed that is basically a crucial modification of the Non-negative Indefinites Approach. I show that this alternative account can capture the distribution of NCIs in JA. I also show that this

account extends to NCIs in other languages such as Moroccan Arabic, Polish, and Spanish and is thus supported cross-linguistically.

Chapter Six concludes the study. This chapter summarizes the discussion in the previous chapters and concludes that NPI licensing and NCI licensing present different phenomena that call for different analyses. This chapter also discusses the implications of the study and the directions for future research.

Chapter Two

Some Aspects of the Clause Structure of Jordanian Arabic

This chapter explores some aspects of the clause structure of JA that are relevant to the discussion of NSIs in the language. These include word order and the structure of sentential negation in the language. Word order and the structure of sentential negation in JA will be discussed in light of previous research on the clause structure of other varieties of Arabic. Previous research on the clause structure of Arabic focused on varieties such as Standard Arabic, Egyptian Arabic, Lebanese Arabic, and Moroccan Arabic. To the best of my knowledge, none of the issues that are explored in this chapter has been discussed in JA. I hope that this chapter will add to the body of research on the syntax of Arabic in general.

2.1 Word Order

JA allows for two unmarked word order alternations, namely SVO and VSO as shown in the following examples:

(1) l-bint ʃarəbt l-ħalīb. SVO
the-girl drank.3SF the-milk
'The girl drank the milk.'

(2) ʃarəbt l-bint l-ħalīb. VSO
drank.3SF the-girl the-milk
'The girl drank the milk.'

These examples show that JA allows for only the SVO and the VSO as the unmarked word order alternations in the language. Other word order alternations, namely the OSV, the OVS, and the SOV are also possible but only when the object in these alternations is resumed by a clitic or when it is contrastively focused as shown in the following examples:

(3) l-ħalīb l-bint ʃarəbt-(uh). OSV
the-milk the-girl drank.3SF-(it)
'The girl drank the milk.'

(4) l-ħalīb ʃarəbt-(uh) l-bint. OVS
the-milk drank.3SF-(it) the-girl
'The girl drank the milk.'

(5) l-bint l-ħalīb ʃarəbt-(uh). SOV
the-girl the-milk drank.3SF-(it)
'The girl drank the milk.'

The clitic in these examples is enclosed between two parentheses to indicate that it is optional. However, the absence of the clitic requires a contrastive focus on the object in order for the sentence to be grammatical. That these word order alternations are only possible when the object is resumed by a clitic or is contrastively focused indicates that it is in an A'-position in the left periphery of the clause. Hence, I will refer to these word order alternations as marked word orders in contrast to the unmarked word orders of SVO and VSO.

The same word order alternations have been attested in other dialects of Arabic such as Standard Arabic (Mohammed 2000; Fassi Fehri 1993; Aoun et al. 2010), Palestinian Arabic (Mohammed 2000), Moroccan Arabic (Benmamoun 2000; Aoun et al. 2010), and Lebanese Arabic (Aoun et al. 2010).

2.1.1 The Syntax of the Unmarked Word Order Alternations

In this subsection, I will discuss the possible derivation of the SVO and the VSO word order alternations in JA. These have been assumed to be the unmarked word orders in the language as they require no resumption or contrastive focus on the subject or the object in contrast to other marked word order alternations that require such effects on the object[2].

2.1.1.1 The SVO Word Order

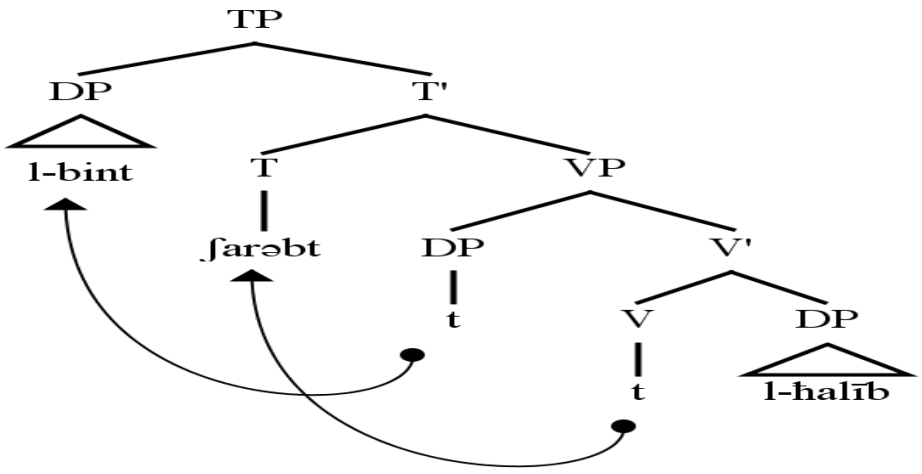
Two hypotheses have been proposed on the possible derivation of the SVO word order in Arabic. Under one hypothesis, the preverbal subject is analyzed as a genuine subject in Spec, TP (Mohammed 1990, 2000; Bolotin 1995; Benmamoun 2000; Bahloul and Herbert 2002). I will refer to this analysis as the Subject Hypothesis. Under another hypothesis, the preverbal subject is analyzed as a topic or a clitic-left dislocated element (Bakir 1980; Fassi Fehri 1988, 1989, 1993; Ouhalla 1988, 1991, 1994; Demirdache 1991; Plunkett 1993, 1996; Aoun et al. 2010). I will refer to this analysis as the Topic Hypothesis.

2.1.1.1.1 The Subject Hypothesis

The Subject Hypothesis proposes that the preverbal subject in the SVO word order in Arabic is a genuine subject as shown in the following representation:

[2] The classification of both SVO and VSO as the unmarked word orders in Arabic is rather a simplified one and is used to draw a line between these two word orders and the word orders of OSV, OVS, and SOV in the sense that, in contrast to the latter word orders, the former word orders do not require the object to be either resumed by a clitic or to be contrastively focused. In fact, the discussion of the SVO and VSO word orders will leave only the VSO word order as the unmarked word order in the language. In contrast to the VSO word order, the subject in the SVO word order is constrained by a definiteness restriction and is sometimes analyised as a topic that is resumed by a null clitic as we are going to see shortly.

(6)

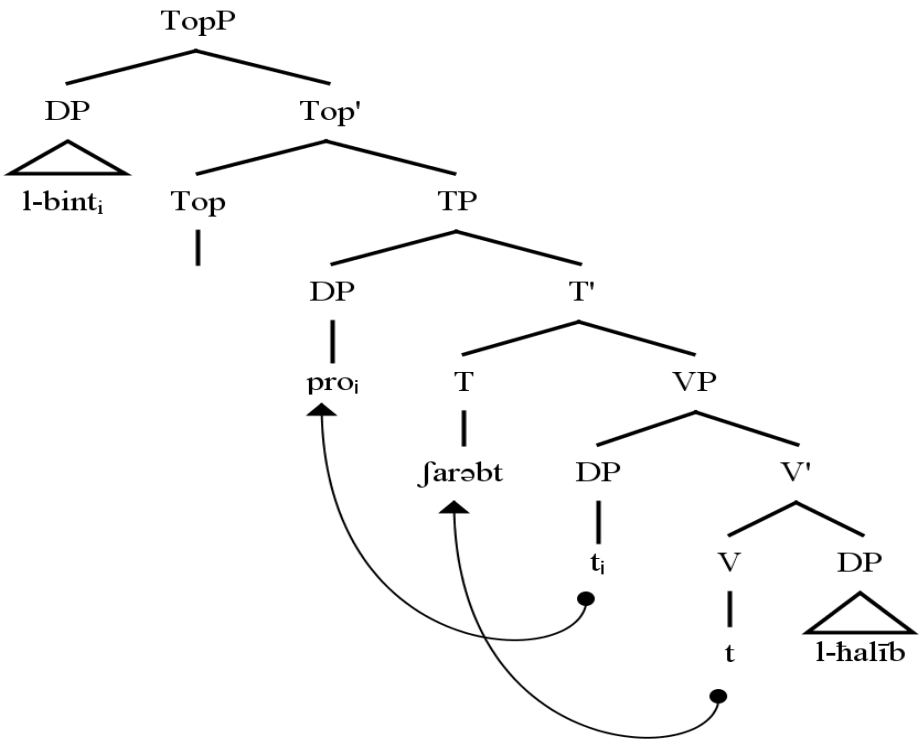


This representation shows that the Subject Hypothesis assumes that the verb originates as the head of VP and then moves to the head of TP leaving a trace behind. It also assumes that the preverbal subject originates in Spec, VP and then moves to Spec, TP. The merger of the preverbal subject in Spec, VP is motivated by the Theta Criterion (Chomsky 1981, 1986) which states that every theta role that a verb can assign must be realized by some argument, and each argument may bear only a single theta role. Thus, the preverbal subject in the representation above is assumed to merge as the Spec of VP in order to be assigned a semantic role. The movement of the subject to Spec, TP is motivated by the Case Filter and the Extended Projection Principle (EPP) (Chomsky 1981). The Case Filter assumes that NPs in argument position must be assigned case, and the EPP states that clauses must have subjects. Thus, the subject in the representation above moves to Spec, TP to check its case and to satisfy the requirement that clauses must have subjects.

2.1.1.1.2 The Topic Hypothesis

The Topic Hypothesis proposes that the preverbal subject in the SVO word order is a topic rather than a genuine subject as shown in the following representation:

(7)



This representation shows that, like the Subject Hypothesis, the Topic Hypothesis assumes that the verb originates as the head of VP and then moves to the head of TP leaving a trace behind. However, this analysis assumes that the preverbal subject is a topic or a clitic-left dislocated element that is based-generated in the A'-domain of the clause and that binds a null resumptive pronominal that is located in the A-domain of the clause.

Aoun et al. (2010) argue that supporting evidence that preverbal subjects in Arabic are topics rather than genuine subjects comes from indefinite subjects and agreement asymmetries in

the language. I will discuss these arguments and show that they extend to JA. Starting with indefinite subjects, post-verbal subjects in JA can either be definite or indefinite; whereas preverbal subjects can only be definite or modified NPs as shown in the following examples:

(8) a. akal l-walad t-tuffaħa.
ate.3SM the-boy the-apple
'The boy ate the apple.'

b. akal walad t-tuffaħa.
ate.3SM boy the-apple
'A boy ate the apple.'

(9) a. l-walad akal t-tuffaħa.
the-boy ate.3SM the-apple
'The boy ate the apple.'

b. walad ṭawīl akal t-tuffaħa.
boy tall ate.3SM the-apple
'A tall boy ate the apple.'

c.*walad akal t-tuffaħa.
boy ate.3SM the-apple
'A boy ate the apple.'

The sentences in (8) show that a post-verbal subject is acceptable regardless of whether it is definite as in (8a) or indefinite as in (8b). The examples in (9), on the other hand, show that preverbal subjects are acceptable only when they are definite NPs as in (9a), modified (i.e. specific) indefinite NPs as in (9b), but they are not acceptable as bare (i.e. non-specific) indefinites as in (9c). These examples suggest that there is a specificity restriction rather than a definiteness restriction on preverbal NPs in JA. It seems that only specific NPs can appear preverbally in JA regardless of whether they are definite or indefinite.

Turning to agreement asymmetries, Arabic displays an agreement asymmetry between the subject and the verb depending on whether the subject precedes or follows the verb. I illustrate this agreement asymmetry with examples from JA below:

(10) a. l-banāt akalan t-tuffaħa.
the-girls ate.3PF the-apple
'The girls ate the apple.'

b.*l-banāt akalat t-tuffaħa.
the-girls ate.3F the-apple
'The girls ate the apple.'

(11) a. akalan l-banāt t-tuffaħa.
ate.3PF the-girls the-apple
'The girls ate the apple.'

b. akalat l-banāt t-tuffaħa.
ate.3F the-girls the-apple
'The girls ate the apple.'

The examples in (10) show that the verb in JA must agree with the subject in all of the phi-features (person, gender, and number) when the subject precedes the verb in the SVO word order. The examples in (11), on the other hand, show that the verb must agree with the subject in person and gender only but it does not have to agree with it in number when the subject follows the verb in the VSO word order.

Arabic is a null subject language. The subject does not need to be overt in finite main clauses in Arabic. Consider the following examples from JA:

(12) a. akalan t-tuffaħa.
ate.3PF the-apple
'They (feminine) ate the apple.'

b. akalu t-tuffaħa.
ate.3PM the-apple
'They (masculine) ate the apple.'

These examples show that the subject can be covert in JA as it can be recovered from the agreement features on the verb. However, a null subject can only be available in the context of full agreement where the verb agrees with the subject in person, gender and number but not in the context of partial agreement where the verb agrees with the subject only in number and gender as shown in the following examples:

(13) a.*akalat t-tuffaħa.
ate.3F the-apple
'They (feminine) ate the apple.'

b.*akal t-tuffaħa.
ate.3M the-apple
'They (masculine) ate the apple.

The only difference between the sentences in (12a-12b) and the sentences in (13a-13b) is that the verb carries full agreement with the verb in the former and partial agreement with the verb in the latter.

Building on the facts that there is an agreement asymmetry in Arabic and that only full agreement allows overt subjects in finite main clauses in Arabic, Aoun et al. (2010) argue that partial agreement is the only genuine agreement in Arabic and that full agreement indicates the presence of a null pronominal subject. Aoun et al. also argue that these facts give supporting evidence that preverbal subjects are not genuine subjects. Preverbal subjects require full agreement on the verb which in turn indicates the presence of a null pronominal. Thus, considering preverbal subjects as genuine subjects will result in a structure with two subjects: the preverbal subject and the null pronominal.

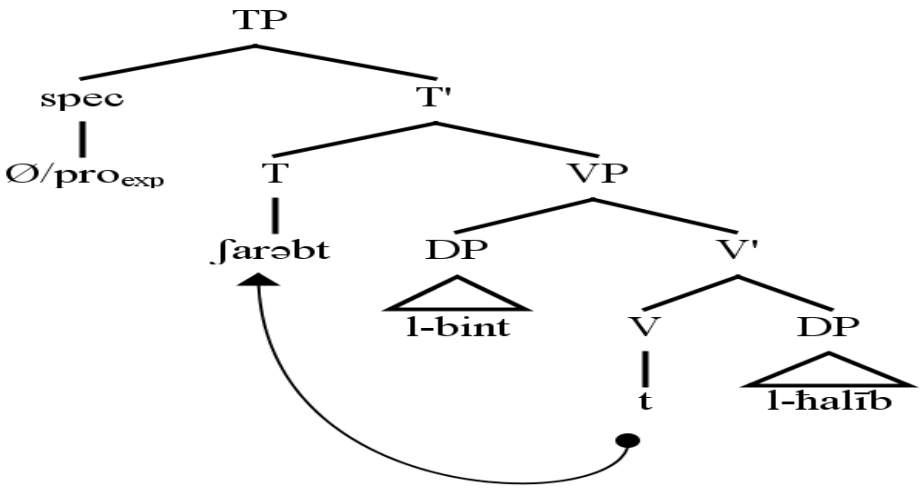
2.1.1.2 The VSO Word Order

Two hypotheses have also been proposed on the possible syntactic derivation of VSO word order in Arabic. Under one hypothesis, the post-verbal subject is in Spec, VP and does not move to Spec, TP (Fassi Fehri 1993; Shlonsky 1997; Mohammed 2000). I will refer to this hypothesis as the Non-movement Hypothesis. Under another hypothesis the subject moves from Spec, VP to Spec, TP (Aoun et al. 1994; Aoun et al. 2010). I will refer to this as the Movement Hypothesis.

2.1.1.2.1 The Non-movement Hypothesis

The Non-movement Hypothesis proposes that the post-verbal subject in the VSO word order is in Spec, VP as shown in the following representation:

(14)



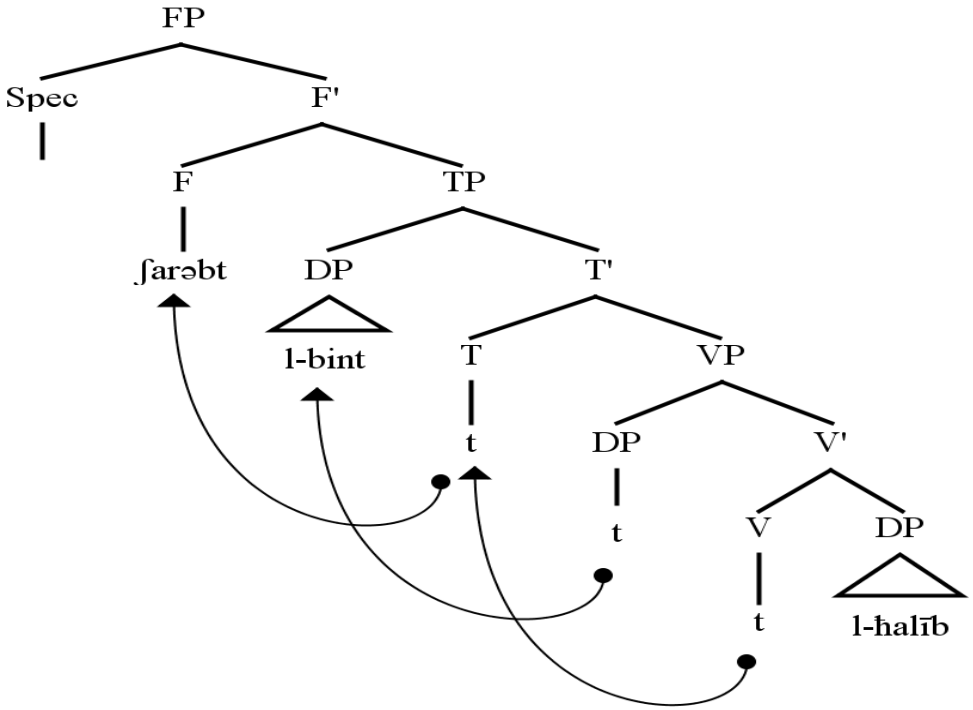
This representation shows that the Non-movement Hypothesis assumes that the verb originates as the head of VP and then moves to the head of TP leaving a trace behind. As for the status of the post-verbal subject, it assumes that it is base-generated in Spec, VP where it is assigned its semantic role and does not move to Spec, TP. It further assumes that Spec, TP is either empty or

filled with an expletive null pronominal. The motivation behind assuming a null expletive pronominal comes as a satisfaction of the EPP.

2.1.1.2.2 The Movement Hypothesis

The Movement Hypothesis proposes that post-verbal subjects are in Spec, TP rather than in Spec, VP as shown in the following representation:

(15)



This representation shows that the Movement Hypothesis assumes that the verb is merged as the head of VP and then moves to the head of TP and subsequently to the head of a functional projection outside the A-domain of the clause (presumably, FP). It further assumes that the subject is merged as the Spec of VP where it is assigned a sematic role and then moves to the Spec of TP in satisfaction of the Case Filter and the EPP. The subject moves to Spec of TP in

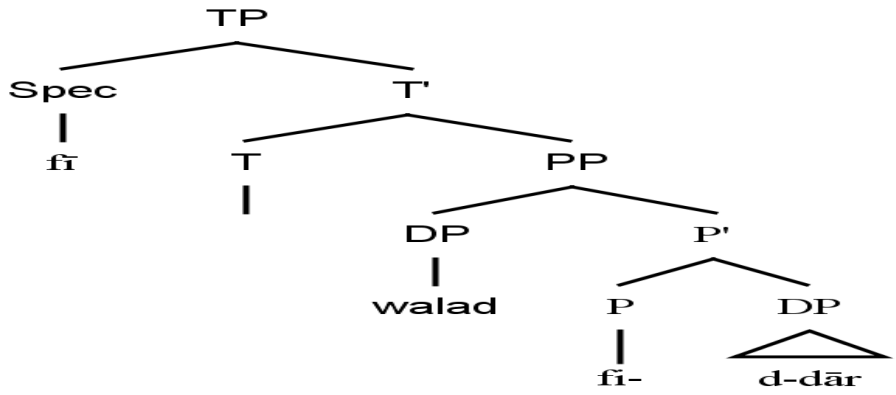
order to check its case features and in order to fulfill the requirement that clauses must have subjects.

Supporting evidence that post-verbal subjects are in Spec, TP rather than in Spec, VP comes from existential constructions in Arabic (Aoun et al. 2010). Like the case in English, existential constructions in Arabic involve an expletive pronoun followed by an indefinite NP. I illustrate this with the following example from JA:

(16) fī walad fi-d-dār.
there boy in-the-house
'There is a boy in the house.'

A possible analysis for this sentence is to assume that the indefinite NP is in Spec, PP whereas the expletive is in Spec, TP as shown in the following representation:

(17)



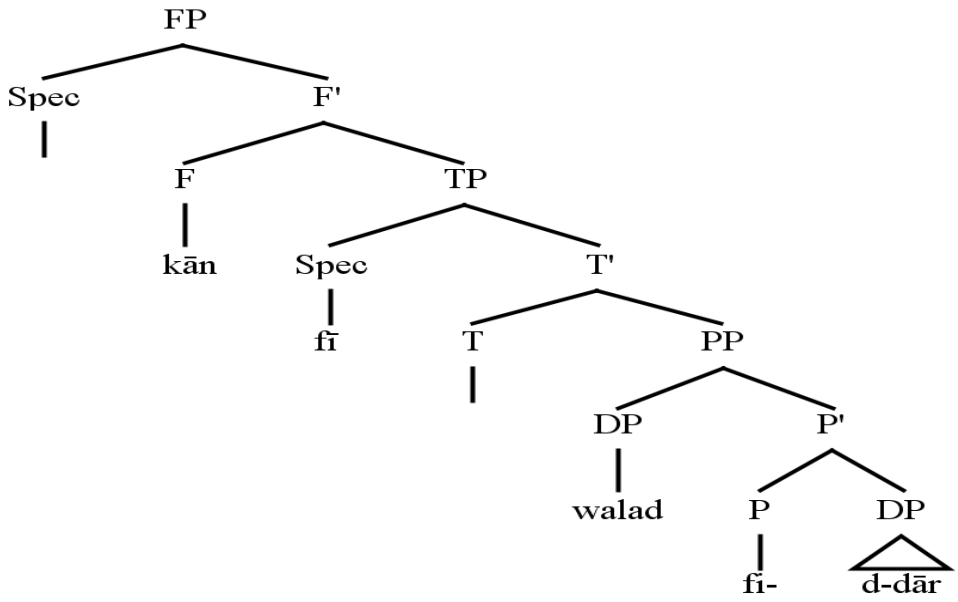
This representation shows that the indefinite NP is merged in Spec, PP where it is assigned a semantic role; whereas the expletive is merged in Spec, TP in satisfaction of the EPP.

Furthermore, expletives follow the auxiliary verb when the latter is present in the sentence as shown in the following example from JA:

(18) kān fī walad fi-d-dār.
was.3SM there boy in-the-house
'There was a boy in the house.'

That the expletive appears in a post-verbal position follows if we assume that the verb is in a position higher than TP as shown in the following representation:

(19)



This representation shows that the indefinite subject is in Spec, PP, the expletive is in Spec, TP, and the verb is a projection higher than TP (presumably, FP). That expletives can appear in a post-verbal position in Arabic indicates two important facts about the structure of the VSO word order. First, post-verbal subjects in the VSO word order are not necessarily in Spec, VP as

expletives can also appear in that position although they do not need to be assigned a semantic role. Second, the verb in the VSO word order is in a position higher than TP as the verb can precede expletives which are assumed to be in the Spec of TP in satisfaction of the EPP.

In brief, we have seen that the structure of the unmarked word order alternations of SVO and VSO in Arabic is still a subject of controversy. We will see later in this study that the distribution of NSIs in the different varieties of Arabic has important implications for this controversy. In particular, we will see that the distribution of NSIs (particularly, NCIs) in the different varieties of Arabic argues against a unified analysis of preverbal subjects in those varieties. The distribution of NCIs in the different varieties of Arabic indicates that preverbal subjects are real subjects in some varieties of Arabic (e.g. Moroccan Arabic); whereas they are topics in other varieties (e.g. JA). The following sub-subsection discusses the syntax of the marked word order alternations in JA.

2.1.2 The Syntax of the Marked Word Order Alternations

In this subsection, I discuss the possible derivation of the marked word order alternations in JA (i.e. the OSV, the OVS, and the SOV). These word order alternations are marked in the language because, unlike the unmarked word order alternations discussed above, they require the object to be either resumed by a clitic or to be contrastively focused.

Before I discuss the possible derivation the marked word order alternations mentioned above, I will discuss some differences that have been noticed between focus-fronting constructions and clitic-left dislocation constructions in some dialects of Arabic, namely Standard Arabic and Lebanese Arabic:

a. Focus phrases, when fronted, are related to gaps inside the sentence, while CLLDed [clitic-left dislocated] phrases are related to a pronominal clitic.
b. Focus constructions are sensitive to Island Constraints, while CLLD [clitic-left dislocation] constructions are not.
c. There can only be one focused phrase in a given clause, while there are no such limitations on the number of CLLDed elements in a given clause.
d. A fronted focus phrase bears the case marking of its corresponding gap, whereas a CLLDed phrase generally bears Nominative Case.
e. Focus fronting, unlike CLLD, triggers subject-verb inversion in Standard Arabic.
f. In Standard Arabic, focus phrases must follow CLLDed elements. This does not extend, however, to some of the other modern dialects of Arabic, like Lebanese Arabic, for instance.

(Aoun et al. 2010: 209)

I will now show that these differences extend to JA. First, focus-fronted phrases in JA are related to a gap inside the sentence (20a); whereas clitic-left dislocated phrases are related to a pronominal clitic (20b):

(20) a. l-ħalīb l-bint ʃarbət.
the-milk the-girl drank.3SF
'The girl drank the milk.'

b. l-ħalīb l-bint ʃarəbt-uh.
the-milk the-girl drank.3SF-it
'The girl drank the milk.'

Second, focus-fronting constructions in JA are sensitive to Island Constraints, whereas clitic-left dislocation constructions are not. For example, focus-fronted phrases in JA cannot be related to a gap inside an Adjunct Clause Island, a Complex NP Island, or a Wh-island; whereas clitic-left dislocated phrases can be related to a resumptive clitic inside these islands as shown in the following examples:

(21) Adjunct Clause island

a.*Maryam Yazan ṭalaʕ bidūn ma yʃūf.
Mary Yazan left.3SM without COMP. see.3SM
'Yazan left without seeing Mary.'

b. Maryam Yazan ṭalaʕ bidūn ma yʃūf-ha.
Mary Yazan left.3SM without COMP. see.3SM-her
'Yazan left without seeing Mary.'

(22) Complex NP Island

a.*Maryam Yazan ʃāf z-zalamih ʔəlli ðarab.
Mary Yazan saw.3SM the-man who hit.3SM
'Yazan saw the man who hit Mary.'

b. Maryam Yazan ʃāf z-zalamih ʔəlli ðarab-ha.
Mary Yazan saw.3SM the-man who hit.3SM-her
'Yazan saw the man who hit Mary.'

(23) Wh-island

a.*Maryam Yazan ʃāf ʔayy zalamih ðarab.
Mary Yazan saw.3SM which man hit.3SM
'Yazan saw which man hit Mary.'

b. Maryam Yazan ʃāf ʔayy zalamih ðarab-ha.
Mary Yazan saw.3SM which man hit.3SM-her
'Yazan saw which man hit Mary.'

Third, there can be only one focus-fronted phrase in a given clause in JA (24), while there are no such limitations on the number of clitic-left dislocated phrases in a given clause (25):

(24)*mbāriħ Maryam ʃāf Yazan.
yesterday Mary saw.3SM Yazan
'Yazan saw Mary Yesterday.'

(25) Yazan Maryam ʕarrafna-ha ʕal-ēh.
Yazan Mary introduced.1P-her to-him
'We introduced Mary to Yazan.'

Forth, the order of focus-fronted phrases and clitic-left dislocated phrases is free in JA when both are involved in a sentence as shown in the following examples:

(26) mbāriħ Maryam ʃāf-ha Yazan.
yesterday Mary saw.3SM-her Yazan
'Yazan saw Mary yesterday.'

(27) Maryam mbāriħ ʃāf-ha Yazan.
Mary yesterday saw.3SM-her Yazan
'Yazan saw Mary yesterday.'

Fifth, unlike Standard Arabic but like Lebanese Arabic, JA does not require subject-verb inversion with either focus-fronting constructions (28) or clitic-left dislocation constructions (29):

(28) a. l-ħalīb l-bint ʃarbət.
the-milk the-girl drank.3SF
'The girl drank the milk.'

b. l-ħalīb ʃarəbt l-bint.
the-milk drank.3SF the-girl
'The girl drank the milk.'

(29) a. l-ħalīb l-bint ʃarəbt-uh.
the-milk the-girl drank.3SF-it
'The girl drank the milk.'

b. l-ħalīb ʃarəbt-uh l-bint.
the-milk drank.3SF-it the-girl
'The girl drank the milk.'

Finally, just like other Arabic vernaculars such as Lebanese Arabic, JA cannot be used to test any contrast in the case features of focus-fronted phrases and clitic-left dislocated phrases as these dialects have lost the overt case features.

In what follows, I will discuss three approaches that have been proposed on the structure of focus-fronting constructions and clitic-left dislocation constructions in Arabic. The first two approaches are based on the facts from Standard Arabic (Ouhalla 1994; Shlonsky, 2000). The third approach is based on the facts from Lebanese Arabic (Aoun et al. 2010). I will show that the third approach can better account for the facts in JA than the first two approaches.

2.1.2.1 Ouhalla (1994)

Ouhalla (1994) argues that the differences between focus-fronting constructions and clitic-left dislocation constructions in Standard Arabic can be accounted for if we assume a movement analysis for the former and a base-generation analysis for the latter. The movement analysis of focus-fronting constructions is mainly motivated by the parallelism between these constructions and wh-questions. For example, Ouhalla noticed that both focus-fronted items and fronted wh-words are liked to a gap inside the sentence. Consequently, he postulates that focus-fronting involves the projection of a focus phrase (FP) between CP and IP that hosts focus-fronted items. He assumes that this FP is headed by an abstract head F that bears a [+F] feature that needs to be identified, on a par with the [+Q] feature on C. The identification of the [+F] feature is done either by movement in which case a phrase bearing the [+F] moves to Spec, FP or by Merge in which case a head bearing the [+F] feature merges with the head of FP, a process that Ouhalla calls Morphological Identification.

The base-generation analysis of clitic-left dislocation constructions, on the other hand, is motivated by the differences between these constructions and wh-questions. For example, Ouhalla noticed that, unlike fronted wh-phrases, clitic-left dislocated phrases are linked to an overt resumptive pronoun inside the sentence rather than a gap inside the sentence. Clitic-left

dislocated phrases are assumed to adjoin to the highest functional projection in the clause and to bind a resumptive pronominal clitic inside the sentence.

The movement analysis of focus-fronting constructions and the base-generation analysis of clitic-left dislocation constructions accounts for most of the differences between these two constructions in Standard Arabic. The presence of a gap in focus-fronting and that of a clitic in clitic-left dislocation, the sensitivity of focus fronting to Island Constraints and the lack of it with clitic-left dislocation, the similarities between case marking features between a focus-fronted phrase and its corresponding gap and the lack of it with a clitic-left dislocated phrase and its corresponding clitic follow if we assume that focus-fronting constructions involve movement whereas clitic-left dislocation constructions do not. This analysis also explains the limitation on the number of focus-fronted phrases and the lack of it with clitic-left dislocated phrases in Standard Arabic. Focus-fronting involves feature identification which once satisfied by one phrase prohibits other phrases from being fronted for the same purpose. Clitic-left dislocation, on the other hand, involves base-generation and adjunction which are free and thus are not limited to one phrase. The relative ordering of focus-fronted phrases and clitic-left dislocated phrases in Standard Arabic follows from this analysis too. Clitic-left dislocation involves adjunction to the highest projection which can be an FP that hosts focus-fronted phrases; hence the relative ordering of clitic-left dislocated phrases preceding fronted-focus phrases in the language.

Aoun et al. (2010) point out two problems with this analysis. First, this analysis does not explain the fact that focus-fronting triggers subject-verb inversion in Standard Arabic; whereas clitic-left dislocation does not. Second, this analysis does not extend to other varieties of Arabic, namely Lebanese Arabic. This analysis does not account for the fact that the relative ordering of focus-fronted items and left-dislocated items is free in Lebanese Arabic. JA raises the same

challenge to Ouhalla's analysis as the relative ordering of focus-fronted phrases and clitic-left dislocated phrases is free in the language as shown in the examples in (26-27) above. In the following subsection, I will discuss another analysis of these constructions in Standard Arabic, and I will show that this analysis can better account for the data from other varieties of Arabic such as Lebanese Arabic and JA.

2.1.2.2 Shlonsky (2000)

Shlonsky (2000) proposes an analysis of the left periphery in Standard Arabic along the lines of Rizzi's (1997) 'split-CP' hypothesis. Following Rizzi (1997), Shlonsky (2000) proposes that the traditional CP projection consists of several distinct phrases as shown in the following diagram:

(30) ForceP > TopP > FP > TopP > FinP

Furthermore, Shlonsky proposes an adjacency constraint to capture the fact that focus-fronting triggers subject-verb inversion in Standard Arabic whereas clitic-left dislocation does not. The adjacency constraint states that the verb needs to be adjacent to the element bearing the focus feature in the language and hence it moves to F in order to satisfy this constraint. Shlonsky proposes this constraint based on the parallelism between focus-fronting constructions and wh-questions in Standard Arabic. He noticed that wh-questions also trigger subject-verb inversion in Standard Arabic. He argues that this adjacency condition explains subject-verb inversion in wh-questions if these are taken to be a subclass of focus constructions in the language.

Aoun et al. (2010) argue that one advantage that this analysis has over that of Ouhalla's analysis is that it can account for the free relative ordering of focus-fronted phrases and clitic-left dislocated phrases in Lebanese Arabic. The diagram in (30) proposes two designated positions for topic phrases and one position for focus phrases. It also shows that a topic phrase can either

follow or precede a focus phrase. This analysis readily accounts for the relative free ordering of focus-fronted items and left-dislocated items observed in dialects like Lebanese Arabic. Sentences with a clitic-left dislocated phrase following a fronted-focus phrase instantiate a representation where the TopP follows the FP; whereas sentences with a clitic-left dislocated phrase preceding a fronted-focus phrase instantiate a representation where the TopP precedes the FP. Aoun et al. propose that this free ordering can be ascribed to the lack of the adjacency condition in Lebanese Arabic. One argument that they provide in support of this assumption is that subject-verb inversion is not required in wh-questions in Lebanese Arabic as shown in the following examples:

(31) a. ʔēmta Karīm ʃēf Muna?
when Karim saw.3SM Mona
'When did Karim see Mona?'

b. ʔēmta ʃēf Karīm Muna?
when saw.3SM Karim Mona
'When did Karim see Mona?'

(Lebanese Arabic: Aoun et al. 2010: 216)

The same argument can be extended to JA. JA allows a relative free ordering of focus-fronted phrases and clitic-left dislocated phrases due to the absence of the adjacency condition in the language. Just like the case in Lebanese Arabic, JA does not require subject-verb inversion in wh-questions as shown in the following examples:

(32) a. ktēh Karīm ʃāf Muna?
when Karim saw.3SM Mona
'When did Karim see Mona?'

b. ktēh ʃāf Karīm Muna?
when saw.3SM Karim Mona
'When did Karim see Mona?'

However, Aoun et al. (2010) argue that the adjacency condition is not enough to account for the full range of data in Lebanese Arabic. For example, they noticed that there are some contexts where a focus phrase cannot precede a clitic-left dislocated phrase in Lebanese Arabic. I will replace all of the examples form Lebanese Arabic with examples from JA since the facts in both dialects are parallel. Just like Lebanese Arabic, JA does not allow a fronted-focus phrase to precede a clitic-left dislocated phrase when the latter is related to a clitic inside an island as shown in the following examples:

(33) a. nuktih Maryam xabbarū-ha.
joke Mary told.3P-her
'They told Mary a joke.'

b.*nuktih Maryam xabbaru l-walad ʔəlli bəʕrif-ha.
joke Mary told.3P the-boy who know.3SM-her
'They told the boy who knows Mary a joke.'

c.*wādʒib Maryam xabbarū-ni gabil ma ʃifət-ha ʔənnu l-mʕalmih
thomework Mary told.3P-me before COMP. saw.1S-her that the-teacher.S
ʔaʕṭat ṭ-ṭulāb.
gave.3SF the-students
'They told me before I saw Mary that the teacher gave the students homework.'

d.*l-mudīr Maryam saʔalto iða l-stād kaħat-ha.
the-principal Mary asked.2P whether the-teacher dismissed.3SM-her
'You asked the principal whether the teacher dismissed Mary.'

In (33a), the focus-fronted phrase precedes a clitic-left dislocated phrase that is related to a clitic that is not contained inside an island. In (33b), (33c), and (33d), on the other hand, the focus-fronted phrase precedes a clitic-left dislocated phrase that is related to a clitic that is contained inside a Complex Noun Phrase Island, an Adjunct Island, and a Wh-island respectively. These patterns can be summarized as follows:

(34) a. (Focus-NP)$_i$ …. Clitic left-dislocated-NP$_j$ …. V+Clitic$_j$ ….t$_i$….

b.*(Focus-NP)$_i$ …. Clitic left-dislocated-NP$_j$ ….[$_{island}$ Clitic$_j$ ….] ….t$_i$….

(Aoun et al. 2010: 220)

2.1.2.3 Aoun and Benmamoun (1998), Aoun et al. (2010)

Following Aoun and Benmamoun (1998), Aoun et al. (2010) propose that the Split-CP hypothesis can better account for the syntax of the left periphery in Arabic. One problem they identified with this hypothesis is that it does not account for the patterns in (34). However, they argue that the 'Split-CP' hypothesis can still be maintained if we assume two possible representations for the derivation of clitic-left dislocation constructions in the sense of Aoun and Benmamoun (1998):

(35) a. Clitic left-dislocated-NP$_i$ …. t$_i$-X+clitic ….

b. Clitic left-dislocated-NP$_i$ …. *pro*$_i$-X+clitic ….

(Aoun et al. 2010: 220)

(35a) stands for a representation where the clitic is coindexed with a lexical NP that can later undergo movement; whereas (35b) stands for a representation where the clitic is coindexed with a null pronominal that is related to a base-generated clitic-left dislocated phrase. In other words, clitic-left dislocated phrases that have long been assumed to be uniformly base-generated in their surface position are now viewed to include both base-generation and movement. Aoun et al. argue that the representation in (35a) gives rise to clitic-left dislocation constructions that do not involve islands; whereas the representation in (35b) gives rise to clitic-left dislocation constructions that involve islands. They argue that the representation in (35a) should be added to the inventory of representations available to resumptive constructions. They show that this

representation patterns with the standard gap strategy in that they both involve movement to an A' position. However, the two strategies are different in the sense that the moved element is coindexed with a gap in the gap strategy and with a pronominal clitic in the resumptive strategy. They ascribe this difference to the presence of a Cl(itic) P(rojection) in the sense of Sportiche (1998):

> 'A lexical NP generated in the specifier position of CIP may not remain there. Borrowing Sportiche's analysis of clitic constructions in Romance, Aoun and Benamamoun attribute this generalization to a generalized Doubly Filled Specifier/Head Filter that applies at the level of CIP. In that case, the lexical NP has to vacate this specifier position, leaving a gap.'
> (Aoun et al. 2010: 220)

Aoun et al. use reconstruction in the context of pronominal binding to support the existence of (35a) as a representation available for clitic-left dislocation constructions side by side with the standard representation in (35b). They show that clitic-left dislocation constructions that do not involve islands display reconstruction effects in Lebanese Arabic while those that involve islands do not. I illustrate these facts with examples from JA as it shows the same effects:

(36) a. **ṭālib-[ha]$_i$ l-kaslān** [kul mʕalmih]$_i$ ʕaqabat-uh.
student-her the-lazy every teacher.SF punished.3SF-him
'Every teacher punished her lazy student.'

b.***ṭālib-[ha]$_i$ l-kaslān** ṭalaʕto gabil ma [kul mʕalmih]$_i$ tʕaqb-uh.
student-her the-lazy left.2P before COMP. [every teacher.SF] punish.3SF-him
'You left before every teacher punished her lazy student.'

In (36a), the lower subject quantifier phrase *kul mʕalmih* 'every teacher' can bind the pronoun within the clitic-left dislocated NP *ṭālib-ha l-kaslān* 'her lazy student'. In (36b), on the other hand, the lower subject quantifier phrase cannot bind the pronoun within the clitic-left dislocated NP. Assuming that reconstruction is a property of chains generated by movement (Hornstein

1984; Barss 1986; Chomsky 1993), and assuming that bound pronouns must be c-commended by a proper antecedent at LF (Chomsky 1976, Higginbotham 1980; Hornstein and Weinberg 1990), the grammaticality of (36a) as opposed to the ungrammaticality of (36b) follows from the reconstruction of the clitic-left dislocated NP containing the bound pronoun below the subject quantifier phrase in the former but not in the later.

Aoun et al. argue that their analysis accounts for the patterns observed in (34) above. On the one hand, a focus phrase can precede a clitic-left dislocated phrase that is not related to a clitic inside an island because the clitic-left dislocated phrase in these constructions reconstructs to its base-position and thus does not intercept the focus phrase. On the other hand, a focus phrase cannot precede a clitic-left dislocated phrase that is related to a clitic inside an island because the clitic-left dislocated phrase in these constructions does not reconstruct to its base position and thus intercepts the focus phrase. Interception is defined in terms of minimality in their account. On one hand, a left-dislocated phrase that does not reconstruct appears in an A'-position thus intercepting focus-fronted phrases which also appear in an A'-position. On the other hand, a clitic-left dislocated phrase that reconstructs relocates to an A-position thus not intercepting other A'-elements such as focus phrases.

Furthermore, Aoun et al. propose that movement that is involved in clitic left-dislocation constructions is different from that which is involved in focus-fronting constructions. They argue that movement that is involved in focus-fronting constructions takes place in the syntax (i.e. pre-Spell-Out or at LF) and is driven by feature-checking while movement that is involved in clitic-left dislocation constructions is a post-Spell-Out operation which takes place in the PF component of grammar and which is driven by filters like the Doubly Filled Specifier/Head Filter.

In sum, We have seen that three theories have been proposed on the structure of focus-fronting constructions and clitic-left dislocation constructions in Arabic. We have also seen that a theory within the lines of the proposals of the split-CP hypothesis and the proposals of the Minimalist Program can better account for the range of data from different varieties of Arabic than other accounts. We will see later in this study that the distribution of NSIs in JA supports the Minimalist Split-CP account of focus-fronting and clitic-left dislocation constructions in the language. In particular, we will see that NPIs in JA are acceptable only in focus-fronting constructions and clitic-left dislocation constructions that do not involve islands, but not in clitic-left dislocation constructions that involve islands. We will see that these distributional patterns of NPIs in JA follow immediately if we assume a movement analysis of focus-fronting constructions and clitic-left dislocation constructions that do not involve islands, and a base-generation analysis of clitic-left dislocation constructions that involve islands as proposed by the Minimalist Split-CP hypothesis. We will also see that the Minimalist Split-CP analysis of focus-fronting constructions and clitic-left dislocation constructions in Arabic can account for the different distributional patterns of NCIs in JA. We will see that only NCIs that are licensed at LF as opposed to those that are licensed in the surface syntax can participate in focus-fronting constructions and clitic-left dislocation constructions that are derived by movement.

2.2 The Syntax of Sentential Negation in JA

This section explores the distribution and syntactic structure of sentential negation in JA. I will discuss these structures in light of previous work on sentential negation in other varieties of Arabic.

Arabic has two forms of sentential negation: verbal negation and predicate negation (Brustad 2000, Benmamoun 2000; Aoun et al. 2010). Verbal negation is used in the context of verbal sentences. Four different realizations have been identified for verbal negation in Arabic (Brustad 2000; Benmamoun 2000; Aoun et al. 2010). These include the discontinuous morpheme *ma-ʃ* as attested in Egyptian Arabic, Palestinian Arabic, Sanʔaani (Yemeni) Arabic, and Moroccan Arabic (37); the discontinuous morpheme *ma-(ʃ)* with the enclitic *-ʃ* being optional as attested in Lebanese Arabic (38); the proclitic *ma-* with the exclusion of the enclitic *-ʃ* as attested in Gulf Arabic and Sudanese Arabic (39); and finally the enclitic *-ʃ* with the exclusion of the proclitic *ma-* as attested in the Lebanese dialect of Baskinta (40):

(37) **ma**-qra-**ʃ** l-wəld.
NEG-read.PAST.3MS-NEG the-boy
'The boy did not read.'

(Moroccan Arabic: Aoun et al., 2010: 96)

(38) l-walad **ma**-ʔara-(**ʃ**) l-ktēb.
the-boy NEG-read.PAST.3MS-(NEG) the book
'The boy did not read the book.'

(Lebanese Arabic: Aoun et al., 2010: 96)

(39) **mā** xallaw ʃay **mā** xadū.
NEG left.3P thing NEG took.3P
'They did not leave anything they didn't take'

(Kuwaiti Arabic: Brustad, 2000: 285)

(40) bi-t-ħib-**ʃ** ʃiɣl il-bayt.
ASP-3F-likes-NEG work the-house
'She does not like housework.'

(Lebanese Arabic, Abu-Haider 1979:110)

Predicate negation, on the other hand, is usually used in the context of sentences with non-verbal predicates. Three different realizations have been identified for predicate negation in Arabic (Brustad 2000; Benmamoun 2000; Aoun et al. 2010). These include the nondiscontinous morpheme *maʃ* as attested in Egyptian Arabic, Lebanese Arabic, Palestinian Arabic, and Moroccan Arabic (41); the so-called Negative Copula *mū* as attested in Syrian Arabic (42); and the so-called Pronouns of Negation as attested in Moroccan Arabic, Gulf Arabic, and Egyptian Arabic (43):

(41) huwa **maʃi** hna.
he NEG here
'He is not here.'

(Moroccan Arabic: Aoun et al. 2010: 97)

(42) ʔana **mū** mabṣūṭ əlyom.
I NEG well today
'I am not feeling well today.'

(Syrian Arabic: Cowel 1964: 386)

(43) **ma-nī-ʃ**
NEG-I-NEG
'I am not.'

(Egyptian Arabic: Benmamoun 2000: 7)

Turning to JA, sentential negation in the language is expressed by using the proclitic *ma-* in the context of verbal predicates and the Pronouns of Negation in the context of non-verbal predicates as shown in (44) and (45) respectively below:

(44) a. Yazan **ma**-laʕib faṭbōl.
Yazan NEG-played.3SM soccer
'Yazan did not play soccer.'

b. Yazan **ma**-bilʕab faṭbōl.
Yazan NEG-play.3SM soccer
'Yazan does not play soccer.'

(45) a. Maryam **m-ī** maʕalmih.
Maryam NEG-she teacher
'Maryam is not a teacher.'

b. Yazan **m-u** ṭawīl.
Yazan NEG-he tall
'Yazan is not tall.'

c. l-wlād **m-umah** fi-d-dār.
the-boys NEG-they in-the-house
'The boys are not in the house.'

In what follows, I will present previous analytical approaches to sentential negation in Arabic and discuss their extention to JA. Research on the structural status of sentential negation in Arabic has focused on three questions. These include the syntactic status of negative markers (i.e. whether they are heads, specifiers, or adverbials), the position of negative markers in the clausal hierarchy, and the nature of the different realizations of sentential negation.

2.2.1 The Syntactic Status of Negative Markers

Supporting evidence that negative markers in the modern Arabic dialects head their own syntactic projection has already been suggested in the literature. This evidence includes the ability of negative markers to host subject clitics and to carry subject agreement inflection on par with prototypical heads in the language (Benmamoun 1992, 1996, 1997, 2000; Aoun et al. 2010). These two properties extend to JA. The negative marker in JA can host subject clitics and can carry agreement inflection as illustrated in (46) and (47) respectively below:

(46)

m-ana	I + NEG
m-int	You.MS + NEG
m-inti	You.MF + NEG
m-ū	He + NEG
m-ī	She + NEG
m-ħna	We + NEG
m-intu	You.P + NEG
m-umma	They + NEG

(47) haða **m-ū** ktāb-i.
this NEG-3SM book-my
'This is not my book.'

Further evidence on the head status of negative markers in Arabic can be provided based on what is known as the *why not* test developed by Merchant (2001). Merchant argues that the *why not* construction is a form of phrasal adjunction and thus it is only allowed in languages with phrasal negative markers such as English:

(48) [$_{YP}$ [XP why] [$_{YP}$ not]]

Languages with head negative markers, on the other hand, have been shown to disallow such constructions (49) and employ instead a construction of the *why no* form (50) (Merchant, 2001; Zeijlstra, 2004, 2008):

(49) a.*Perche **non**?
why NEG
'Why not?'

(Italian: Zeijlstra 2004: 154)

b.*Giati **dhen**?
why NEG
'Why not?'

(Greek: Zeijlstra 2004: 154)

(50) a. Perche **no**?
why no
'Why not?'

(Italian: Zeijlstra 2004: 154)

b. Giati **oxi**?
why no
'Why not?'

(Greek: Zeijlstra 2004: 154)

The *why not* test confirms the head status of the negative marker in Arabic. For example, JA disallows *why not* constructions (51) and employs *why no* constructions instead (52):

(51) *lēʃ **ma**?
why NEG
'Why not?'

(52) lēʃ **la**?
why no
'Why not?'

2.2.2 The Position of Negative Markers in the Clausal Hierarchy

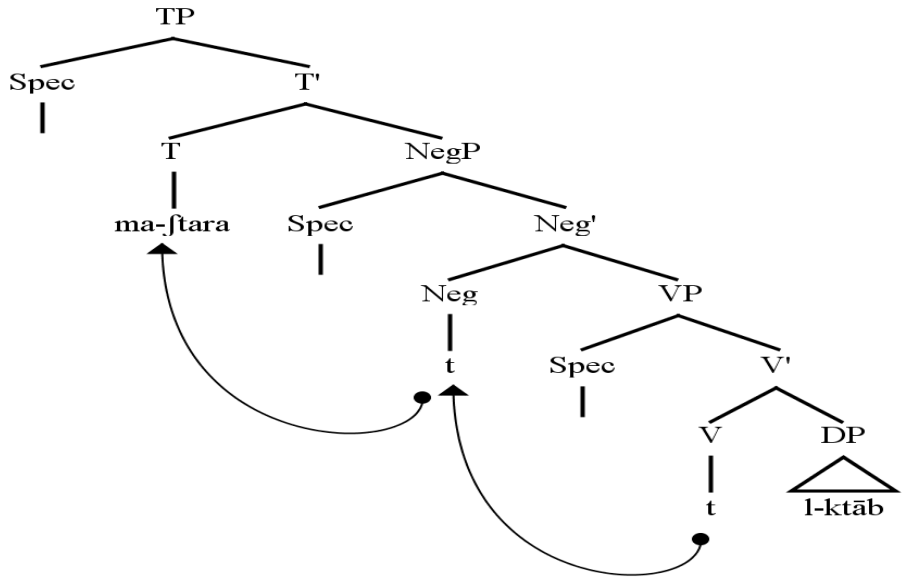
Having established the syntactic status of the negative marker as a head in Arabic, I will now discuss the position of the negative marker in the clausal hierarchy in the language. Two hypotheses have been proposed for the position of the negative projection in the clausal hierarchy in Arabic. Under one hypothesis, the negative phrase is projected between TP and VP (Benmamoun 1992, 1996, 1997, 2000; Ouhalla 2002; Aoun et al. 2010). Under another hypothesis, the negative phrase is projected above TP (Diesing and Jelinek 1995; Shlonsky 1997; Jelinek, 2002; Soltan 2007, 2011). I will refer to the former as the Low NegP Hypothesis and to the latter as the High NegP hypothesis. I will briefly discuss each of these Hypotheses and show that the High NegP Hypothesis can better account for the data in JA than the Low NegP Hypothesis.

2.2.2.1 The Low NegP Hypothesis

The Low NegP Hypothesis, which is mainly an extension of Pollock's (1989) analysis of French negation, places the negative projection between TP and VP. According to this hypothesis, sentence (53) from JA should have the representation in (54):

(53) a. ma-ʃtara l-ktāb.
NEG-bought.3SM the-book
'He did not buy the book.'

(54)



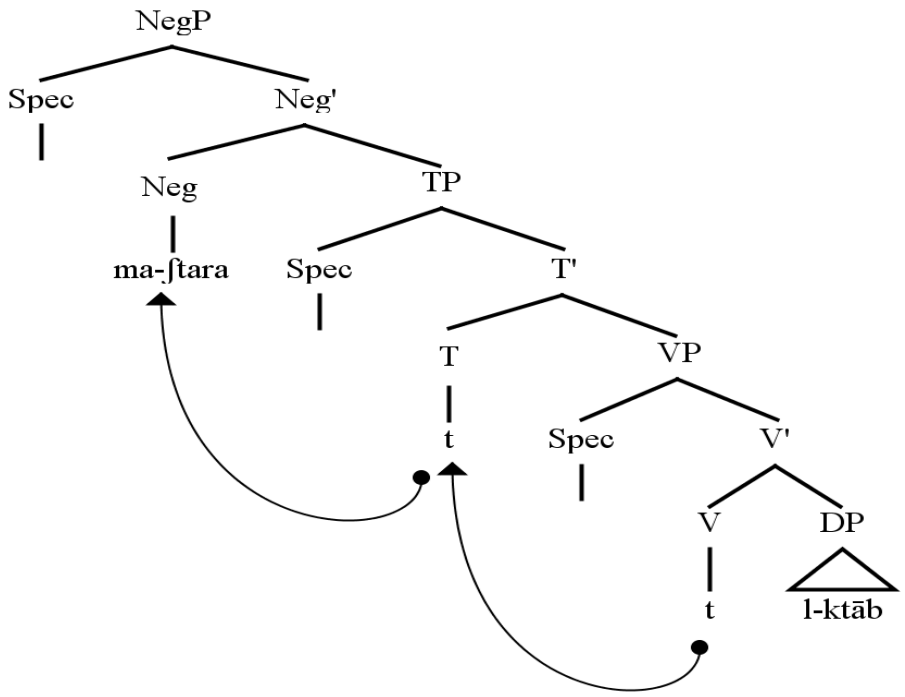
The main motivation for this analysis of sentential negation in Arabic is that it can explain the fact that the negative marker ends up prefixed to the verbal predicate. Given the assumption that the verb moves to the head of TP in Arabic, it has to move to the head of NegP first where it picks the negative marker and then moves to the head of TP. That the verb has to move to the head of NegP in its way to the head of TP follows from the Relativized Minimality of Rizzi

(1990) or the Head Movement Constraint of Travis (1984),which both ban movement of a head across another head.

2.2.2.2 The High NegP Hypothesis

The High NegP Hypothesis places the negative projection above TP. According to this hypothesis, sentence (53) from JA above should have the following representation:

(55)



The main motivation for this analysis comes from the fact that, in addition to main verbal predicates, the negative marker in Arabic can also attach to some other elements in the language. These include auxiliary verbs (56), prepositions hosting a pronoun clitic (57), indefinite pronouns (58), existential particles (59), and adverbials hosting a pronoun clitic (60). All of the examples below are from JA.

(56) **ma**-kān biħib t-tuffāħ.
NEG-was.3SM like.3SM the-apples
'He did not like apples.'

(57) **ma**-ʕind-i sayyarah.
NEG-at-me car
'I do not have a car.'

(58) **ma**-ħada d͡ʒa.
NEG-one came.3SM
'No one came.'

(59) **ma**-fī ħada d͡ʒa.
NEG-there one came.3SM
'No one came.'

(60) **ma**-ʕumr-u ħaðir l-d͡ʒtimāʕ.
NEG-ever-him attended.3SM the-meeting
'He has not ever attended the meeting.'

In most of these examples, the negative marker surfaces as a prefix on an element that seems to be base-generated in a position in TP or even above TP and hence cannot be captured by an analysis that places the negative projection below TP. For example, it is not clear how such an analysis can account for a sentence like (58) above where the negative marker appears as a prefix on an expletive particle taking into consideration the standard analysis of expletives as occupying Spec, TP. Therefore, I assume that the High NegP Hypothesis can better capture the facts in JA than the Low NegP Hypothesis.

2.2.2.3 The Nature of the Different Realizations of Sentential Negation

Benmamoun (2000) provides the most widely accepted analysis of the different patterns of sentential negation in Arabic. His analysis is based on the widely documented nature of the elements that can host sentential negation in Arabic as elements that need to be marked for person subject agreement features (Eid 1993; Awad 1998; Hoyt 2007). This is evident in most

realizations of sentential negation in Arabic. First, as has already been noted, verbal negation can appear with main verbs, auxiliary verbs, prepositions hosting a pronoun clitic, indefinite pronouns, existential particles, and adverbials hosting a pronoun clitic. Among these, main verbs, auxiliaries, and inflected propositions and adverbs are clearly marked for person agreement as evident from the inflection that they carry; indefinite pronouns and existential particles, on the other hand, are argued to be intrinsically marked for the third person singular masculine agreement features. Second, predicate negation can take the form of either a Pronoun of Negation or a Negative Copula with the former carrying subject agreement inflection and the latter intrinsically marked for the third person singular masculine features. This leaves only forms like the nondiscontineous *maf,* as one bare form not hosted by an element carrying subject agreement. However, this morpheme is still associated with a person agreement feature as will be shown shortly.

Based on these empirical facts and building on Chomsky's (1995) Minimalist Program, Benmamoun postulates that negation in Arabic is specified for an uninterpretable [+D] feature that needs to be checked against an appropriate interpretable [+D] feature. Therefore, he argues that all realizations of sentential negation in Arabic boil down to one form that has different realizations depending on how negation checks its [+D] feature. Checking the [+D] feature associated with negation can take two forms: either through merger with an element that carries an interpretable [+D] feature or through being in a Spec-head relation with such an element.

The merger option is instantiated in all cases of verbal negation, and in the case of Negative Copulas and Pronouns of Negation. In the case of verbal negation, merger takes place either via head movement or incorporation. Head movement can be assumed to take place with main verbs, auxiliaries, and inflected prepositions as these are heads and hence they can attach to

negation via head movement. Incorporation takes place with indefinite pronouns, existential particles, and inflected adverbs as these are not heads but rather XPs and hence assuming movement to a head position with these violates structure preservation. In the case of predicate negation, on the other hand, merger takes place with either a subject pronoun or an expletive. Merger with a subject pronoun results in the Pronoun of Negation forms; whereas merger with an expletive results in the Negative Copula form. With both the Pronouns of Negation and the Negative Copula, the subject pronouns and the expletive are assumed to originate in an XP position below Neg^0 and then attach to Neg^0 via incorporation.

The Spec-head option, on the other hand, is instantiated in the case of the bare nondiscontineous morpheme *maf*. Benmamoun argues that the bare form of the negative marker is used in languages where the uninterpretable [+D] feature associated with negation can be checked via a Spec-head relation with a subject in Spec, NegP assuming that subjects are nominals associated with an interpretable [+D] feature.

Turning to JA, we have seen that the language employs the proclitic *ma-* for verbal negation and the Pronouns of Negation for predicate negation. In both cases, the negative marker needs to be associated with an element marked for person agreement: a lexical host morphologically or intrinsically marked for subject person agreement in the case of verbal negation and a subject pronoun in the case of the Pronouns of Negation. Therefore, I claim that Benmamoun's proposals for motivating raising to Neg^0 and for the different forms of sentential negation in Arabic extend to JA.

In sum, this section has explored the structure of sentential negation in Arabic, especially JA. The negative marker in Arabic heads its own projection that is located above TP. This negative marker is associated with an uniterpretable [+D] feature that needs to be checked

against an interpretable [+D] feature. The feature checking requirement explains the different realizations of negation in the language.

2.3 Summary and Conclusion

This chapter has explored some aspects of the clause structure of Arabic, particularly JA that are relevant to the study of NSIs. These include the syntax of the different word order alternations and the structure of sentential negation in the language. JA allows for five different word order alternations: two unmarked word order alternations and three marked word order alternations. The structure of the two unmarked word order alternations of SVO and VSO are still a matter of controversy. Different theories have also been proposed on the structure of the marked word order alternations of OSV, OVS, and SOV. It has been shown that the structure of these word order alternations can best be captured within the proposals of the Split-CP hypothesis and the Minimalist Program. Finally, it has been shown that the negative marker in Arabic heads its own projection above TP, and that it is associated with an uniterpretable [+D] feature that needs to be checked against an interpretable [+D] feature.

Chapter Three

Negative Sensitive Items in Jordanian Arabic

This chapter reviews expressions that function as NSIs in JA. JA exhibits both types of NSIs that are discussed in the literature: NPIs and NCIs. I use the negative-fragmentary-answer-diagnostic to tease apart NPIs from NCIs in the language. JA exhibits four types of NPIs: nominal, determiner, adverbial, and idiomatic NPIs. I introduce two types of NCIs: determiner and adverbial NCIs. The etymology of both NPIs and NCIs in JA shows that these items derive from expressions with scalar implications, just like the case with NSIs in many languages. I also discuss distributional differences between NPIs and NCIs in JA.

3.1 NPIs in JA

JA exhibits four types of NPIs. These include nominal NPIs, determiner NPIs, Adverbial NPIs, and idiomatic NPIs. In 3.1.1, I discuss nominal NPIs in the language. In 3.1.2, I discuss determiner NPIs. In 3.1.3, I discuss adverbial NPIs. In 3.1.4, I discuss idiomatic NPIs.

3.1.1 Nominal NPIs

Nominal NPIs in JA include the indefinite pronouns *ħada* 'anyone, someone' and *iʃi* 'anything, something' as exemplified in (1) and (2) respectively below:

(1) a.*(ma)-d͡ʒa **ħada**.
NEG-came.3S one
'No one came.'

b. Maryam *(ma)-ʃāfat **ħada**.
Mary NEG-saw.3SF one
'Mary did not see anyone.'

(2) a.*(ma)-ṣār **iʃi**.
NEG-happened.3S thing
'Nothing happened.'

b. Maryam *(ma)-akalat **iʃi**.
Mary NEG-ate.3SF thing
'Mary did not eat anything.'

The NPI *ħada* derives from the numeral *wāħad* 'one' which itself functions as a positive polarity item in the sense that it is incompatible with sentential negation in the language:

(3) a. Maryam ʃāfat **wāħad** fi-l-bēt.
Mary saw.3SF one in-the-house
'Mary saw someone in the house.'

b.*Maryam ma-ʃāfat **wāħad** fi-l-bēt.
Mary NEG-saw.3SF one in-the-house
'Mary did not see anyone in the house.

The derivation of an NSI from the numeral 'one' is not peculiar to JA. In his well-known survey of indefinite pronouns in 100 languages, Haspelmath (1997) identified different languages with NSIs or items with a strong tendency to be restricted to negative contexts that are derived from the numeral 'one'. Some examples are listed below:

(4)

Kabyle	**yiwen** 'one; someone'
Dongolawi	**wɛ́r** 'one; someone'
Welsh	rhyw-**un**'someone' (un 'one')
Modern Greek	kan-**énas** 'anybody' (énas 'one')
Latvian	ne-**viens** 'nobody' (viens 'one')
Pashto	**yaw** cok 'somebody' (yaw 'one')

Icelandic **ein**-hver ‘somebody’ (ein ‘one’)

(Haspelmath 1997: 183-184)

The NPI *i/i*, on the other hand, is based on the general ontological-category noun ‘thing’. General ontological-category nouns include expressions like ‘person’, ‘thing’, ‘place’, ‘time’, ‘property’, ‘manner’, ‘amount’, ‘reason’, etc. Generic-noun-based NSIs are widespread in the world’s languages. For example, out of 100 languages, Haspelmath (1997) identified 42 languages with generic-noun-based indefinite pronouns that have a tendency to be restricted to negative contexts. Some examples are listed below:

(5)

English	Somebody/anybody; something/anything; sometime/anytime
Hebrew	iʃ ‘anyone’ lit. ‘a person’
Persian	kas-i ‘someone’ lit. ‘a person’; čiz̧-i ‘something’ ‘a thing’; (dær) yek ǰâ-yi ‘somewhere’ ‘(at) one place’; yek vaɣt-I ‘sometime’ ‘one time’; yek towr-i ‘somehow’ ‘one manner’
French	rien ‘nothing’ lit. ‘a thing’
Maltese	xi mkien ‘somewhere’ (mkien ‘place’)
Italian	qualcosa ‘something’ (cosa ‘thing’)

(Haspelmath 1997)

That the numeral ‘one’ and the ontological category nouns like ‘thing’ are the basis for deriving many negative sensitive indefinite pronouns is not a coincidence. These two expressions denote scalar endpoints and hence they give rise to scalar implications (Haspelmath 1997). The numeral ‘one’ denotes the low endpoint on a number scale, and the ontological category noun ‘thing’ can also denote the low endpoint on a pragmatic scale when used in an appropriate

context such as sentence negation. Scalar expressions are one of the major sources of NSIs in the world's languages as will be shown in the following discussion. Such expressions can be informative only when used in an appropriate context (i.e. NSIs licensing context.)

The NPI *iʃi* does not exclusively occur in negative contexts; it can occasionally appear in affirmative declarative sentences:

(6) Maryam ʃãfat **iʃi** ʕala ṭ-ṭāwlih.
Mary saw.3SF thing on the-table
'Mary saw something on the table.'

Like the case with the NPI *ħada*, the NPI *iʃi* has the corresponding word *ʃaɤlah* which translates as English 'something'. This word is a positive polarity item and hence is the word that is most often used in affirmative sentences in the language:

(7) a. Maryam ʃãfat **ʃaɤlah** ʕala ṭ-ṭāwlih.
Mary saw.3SF thing on the-table
'Mary saw something on the table.'

b.*Maryam ma-ʃãfat **ʃaɤlah** ʕala ṭ-ṭāwlih.
Mary NEG-saw.3SF thing on the-table
'Mary did not see anything on the table.'

That the word *iʃi* can occasionally appear in affirmative declarative sentences does not weaken its status as an NPI. Rather, NPIs of this type are viewed as undergoing a process of grammaticalization whereby they become restricted to negative contexts and hence change from regular expressions to NSIs (Hoeksema 1994). Hoeksema refers to such expressions as semi-NPIs as opposed to strict NPIs that can only appear in negative contexts. That some NPIs can still appear in affirmative declarative sentences is a natural consequence of the process of 'layering'. Layering refers to the observation that the older use of a grammaticalized expression

does not disappear altogether but usually stays around. Hoeksema notes that layering is very common with NPIs:

> 'Layering is in fact so rampant that there are hardly any "pure" NPIs that have no other uses as well. This makes it virtually impossible to automatically detect NPIs in a corpus: first the different uses have to be distinguished.'
>
> (Hoeksema 1994: 274)

Applying the negative-fragment-answer-diagnostic to the NSIs *ħada* and *iʃi* shows that these are NPIs rather than NCIs as these cannot be used to give a fragment answer as shown in the following examples:

(8) A: mīn ʃift?
who saw.2SM
'Who did you see?'

B: *__ħada__.
one
'Anyone.'

(9) A: ʃū akalit?
what ate.2SM
'What did you eat?'

B: *__iʃi__.
thing
'Anything.'

3.1.2 Determiner NPIs

Determiner NPIs in JA include the scalar focus particle *walaw* 'even, at least' and the interrogative pronoun *ʔayy* 'which' which combine with indefinite nouns as exemplified in (10) and (11) respectively below:

(10) a.*(ma)-ħall **walaw** ṭālib s-suʔāl.
NEG-answered.3S even student the-question
‘Even (one) student did not answer the question.’

b. Maryam *(ma)-ħallat **walaw** suʔāl.
Mary NEG-answered.3SF even question
‘Mary did not answer any question.’

(11) a.*(ma)-ħall **ʔayy** ṭālib s-suʔāl.
NEG-answered.3S which student the-question
‘No student answered the question.’

b. Maryam *(ma)-ħallat **ʔayy** suʔāl.
Mary NEG-answered.3SF which question
‘Mary did not answer any question.’

The scalar focus particle *walaw* can be decomposed into the conjunction particle *wa* ‘and’ and the conditional marker *law* ‘if’. It literally translates as ‘even’ or ‘at least’, and it specifies its associate as the low endpoint on a pragmatic scale. The use of a scalar focus particle that literally translates as ‘even’, ‘at least’, ‘also’, or ‘and’ is a common source of indefinite pronouns that have a tendency to be restricted to negative contexts in the world’s languages. Haspelmath (1997) identified different languages with scalar focus particles functioning as negative-sensitive indefiniteness markers. Some examples are listed below:

(12)

Serbian/Croatian	**i**-ko ‘anyone’	(i ‘and, also, even’)
Indonesian	siapa-**pun** ‘anyone’	(pun ‘also, even’)
Hebrew	**af** eħad ‘nobody’	(af ‘even’)
Chechen	addam **a** ‘nobody’	(a ‘also’)
Hindi/Urdu	koi **bhii** ‘anybody’	(bhii ‘also, even’)
Dutch	**ook maar** iemand ‘anybody’	(ook maar ‘even, at least’)

Russian	**xot'** kto 'anyone'	(xot' 'at least')
Finnish	**vaikka** kuka 'anyone'	(vaikka 'at least')

(Haspelmath 1997: 157-159)

Interrogative-based indefinites are also very widespread. The majority of the world's languages include indefinites that are either derived from or identical to interrogative pronouns (Moravcsik 1969; Ultan 1978; Haspelmath 1997). For example, in his sample of 100 languages, Haspelmath identified 63 languages with interrogative-based indefinite pronouns that have a tendency to appear in negative contexts. Some examples are listed below:

(13)

Classical Greek	tís 'who?', tis 'someone'; poũ 'where', pou 'somewhere'
Chinese	sheí 'who?', sheí 'someone'; shénme 'what?', shénme 'something'
Hopi	hak 'who?', hak 'someone'; haqam 'where?', haqam 'somewhere'
Newari	su 'who?', su 'nobody' (with verbal negation); chu 'what?', chu 'nothing' (with verbal negation)
Dyirbal	wanya 'who?', wanya 'someone'; minya 'what?', minya 'something'
Khmer	qwəy 'what?', qwəy 'something'; naa 'where?', naa 'somewhere'

(Haspelmath 1997: 170)

Like other interrogative-based indefinite pronouns, *ʔayy*-phrases are not restricted to negative sentences. In fact, *ʔayy*-phrases can occur in positive contexts where they can have a wh-reading but never a nominal indefinite reading:

(14) Maryam ħallat **ʔayy** suʔāl?[3]
Mary answered.3SF which question
'Which question did Mary answer?'

I will refer to *ʔayy*-phrases that have a nominal indefinite reading as indefinite-*ʔayy*-phrases and to *ʔayy*-phrases that have a wh-reading as wh-*ʔayy*-phrases. Indefinite-*ʔayy*-phrases will be considered as NPIs because the indefinite nominal interpretation of *ʔayy*-phrases is sensitive to the presence of negation: this interpretation is only available when negation is present in a sentence. Supporting evidence for labeling indefinite-*ʔayy*-phrases as NPIs comes from the fact that only the indefinite nominal interpretation but never the wh-reading interpretation of theses phrases is available in negative-like contexts (i.e. contexts that are in some sense negative although they do not involve a sentential negative marker) that have long been identified as typical NPI licensing contexts. These contexts include, among others,

[3] Four different strategies have been identified for forming wh-interrogatives in Arabic. These include the gap strategy, the resumptive strategy, class II resumptive strategy, and the in-situ strategy (Aoun et al. 2010). JA seems to make use of all four of these strategies for forming wh-interrogatives as shown in the following examples:

(1) a. ʔayy ṭālib ðarabat Maryam? (Gap strategy)
which student hit.3SF Mary
'Which student did Mary hit?'

b. ʔayy ṭālib ðarabat-uh Maryam? (Resumptive Strategy)
which student hit.3SF-him Mary
'Which student did Mary hit?'

c. ʔayy ṭālib ʔəlli ðarabat-uh Maryam? (Class II Resumptive Strategy)
which student that hit.3SF-him Mary
'Which student did Mary hit?

d. Maryam ðarabat ʔayy ṭālib? (In-situ strategy)
Mary hit.3SF which student
'Which student did Mary hit?'

questions and conditionals (Ladusaw 1980; Linbarger 1981; Progovac 1994; Giannakidou 1998)[4]:

(15) mīn ħall **ʔayy** suʔāl?
who answered.3S which question
'Who answered any question?'

(16) iða **ʔayy** ṭālib ħall s-suʔāl, raħ yənd͡ʒaħ.
if which student answered.3S the-question, will pass.3S
'If any student answers the question, he will pass.'

The same facts have been reported about wh-words in other languages such as Mandarin Chinese. Wh-words in Mandarin Chinese have been shown to have a wh-word interpretation and an indefinite nominal interpretation of which only the latter is sensitive to negation and typical negative-like NPI licensing contexts (Li 1992; Aoun and Li 1993; Xie 2007) as shown in the following examples:

(17) a. Ta xihuan **shenme**?
he like what
'What does he like?'

b. Ta bu xihuan **shenme**.
he not like what
'He does not like anything.'

c. Ta bu xihuan **shenme** ma?
he not like what Q
'Does he like something (anything)?'

[4] In addition to the wh-reading and the NPI-reading, ʔayy-DPs in JA have a free choice reading as shown in the following example:

(1) l-fīrān bətxāf min ʔayy guṭ.
the-mice fear.3P from which cat.
'Mice fear any cat.'

This example shows that *ʔayy* in JA is acceptable in generics which is a typical licensing context for free choice items. The licensing of free choice *ʔayy* is beyond the scope of this study.

d. Yaoshi/Ruguo ta xihuan **shenme** …….
If he like what
'If he likes anything ……'

(Mandarin Chinese: Li 1992: 127-129)

These examples show that the wh-word *shenme* 'what' in Mandarin Chinese can only be interpreted as a wh-word in affirmative sentences (17a). These examples also show that the wh-word *shenme* can only be interpreted as an indefinite nominal when it appears in a negative sentence (17b), a yes/no question (17c), or a conditional sentence (17d). The sensitivity of the indefinite nominal interpretation of wh-words like *shenme* in Mandarin Chinese to contexts like negative sentences, yes/no questions, and conditionals has been considered as a strong piece of evidence on the status of this interpretation as an NPI as these are typical NPI licensing contexts (Li 1992; Aoun and Li 1993; Xie 2007).

The negative-fragment-answer-diagnostic confirms that *walaw*-phrases and *ʔayy*-phrases are NPIs rather than NCIs in JA. *Walaw*-phrases and *ʔayy*-phrases cannot be used to provide a fragment answer as shown in the following examples:

(18) A: mīn nad͡ʒaħ?
who passed.3s
'Who passed?'

B: *__walaw__ ṭālib.
even student
'Any student.'

(19) A: mīn nad͡ʒaħ?
who passed.3s
'Who passed?'

B: *__ʔayy__ ṭālib.
which student
'Any student.'

3.1.3 Adverbial NPIs

Adverbial NPIs in JA include the temporal indefinite adverb *ʕumur* 'ever' as shown in the following example:

(20) Maryam *(ma)-**ʕumur**-ha ħallat l-wād͡ʒib.
Mary NEG-ever-her answered.3SF the-assignment
'Mary has not ever answered the assignment.'

The adverbial NPI *ʕumur* is etymologically derived from the homophonous noun *ʕumur* which can literally translate as either 'life' or 'age':

(21) Maryam gaððat **ʕumur**-ha fi-ʔamrīka.
Mary spent.3SF life-her in-America.
'Mary spent her life in America.'

(22) **ʕumur** Maryam xams snīn.
age Mary five years
'Mary is five years old.'

The grammaticalization of maximal-unit expressions like 'life', 'age', 'eternity', 'world', etc into NSIs is attested in the world's languages (Krifka 1995; Giannakidou 1998, 2011; Haspelmath 1997). Some examples are listed below:

(23)

Hebrew	me-ʕolam 'never (in the past)', lit. 'from eternity' le-ʕolam 'never (in the future)', lit. 'until eternity'
Spanish	en mi vida 'never', lit. 'in my life'
Irish	go brách 'never, (for) ever', lit. 'until eternity'

(Haspelmath 1997: 229)

These expressions are viewed as inherently denoting an endpoint and hence they can have scalar implications when they are used non-specifically in the proper environment. The scalar meaning of these expressions becomes necessary in environments that license NSIs such as sentential negation:

(24) Maryam ma-**ʕumur**-ha ʃāfat ʔasad.
Mary NEG-ever-her saw.3SF lion
'Mary has not ever seen a lion.'

Here the literal non-scalar meaning of *ʕumur* is acceptable on theoretical grounds but is pragmatically irrelevant or uninformative.

The negative-fragment-answer-diagnostic confirms the status of the adverbial NPI *ʕumur* as an NPI rather than an NCI. The adverbial NPI *ʕumur* cannot be used to provide a fragment answer as shown in the following example:

(25) A: Maryam rāħat ʕala ʔamrīka?
Mary went.3SF to America
'Has Mary gone to America?'

B: *__ʕumur__-ha.
ever-her
'Ever.'

3.1.4 Idiomatic NPIs

Idiomatic NPIs in JA include expressions like *fils aħmar* 'red cent' as shown in the following example:

(26) Maryam *(ma)-ṣarafat **fils aħmar**.
Mary NEG-spent.3SF cent red
'Mary did not spend a red cent.'

Expressions like *fils aħmar* literally denote an entity of a small amount and hence are considered as minimal-unit expressions. Like maximal-unit expressions, minimal-unit expressions are also a major source of NSIs in the world's languages. They constitute the most widespread source of NSIs worldwide (Israel 2004). These expressions also denote a scalar-endpoint and hence they can be informative only in an appropriate context where they can have a scalar interpretation. Examples of minimal-unit-based NSIs in English include expressions like 'a jot', 'an iota', 'a red cent', 'lift a finger', 'budge an inch', etc.

The idiomatic NPI *fils aħmar* cannot be used to provide a fragment answer and hence it should be classified as an NPI rather than an NCI:

(27) A: ʃũ ṣarafat Maryam?
what spent.3SF Mary
'How much did Mary spend?'

B: ***fils aħmar**.
cent red
'A red cent.'

This section showed that JA exhibits four types of NPIs. These include nominal, determiner, adverbial, and idiomatic NPIs as shown in the following table:

Table 1: NPIs in JA: nominal NPIs, Determiner NPIs, adverbial NPIs, and idiomatic NPIs.

Nominal NPIs	Determiner NPIs	Adverbial NPIs	Idiomatic NPIs
ħada 'anyone, someone' iʃi 'anything, something'	walaw 'even, at least' Indefinite-ʔayy 'any'	ʕumur 'ever'	fils aħmar 'red cent'

The etymology of the items listed in Table 1 above shows that these items are derived from either maximal-unit or minimal-unit expressions that give rise to scalar implications. These

sources of deriving NPIs are very common in the world's languages and not peculiar to JA. The status of these items as NPIs rather than NCIs has been tested against their ability to provide a fragment answer. None of the expressions in Table 1 can provide a fragment answer.

3.2 NCIs in JA

This section reviews expressions that function as NCIs in JA. JA exhibits two types of NCIs. These include determiner NCIs and adverbial NCIs (cf. Hoyt 2010). In subsection 3.2.1, I discuss determiner NCIs in the language. In subsection, 3.2.3, I discuss adverbial NCIs.

3.2.1 Determiner NCIs

Determiner NCIs in JA include the scalar focus particle *wala* 'even, at least' which combines with indefinite nouns as shown in the following examples:

(28) a. *(ma)-ħall **wala** ṭālib s-suʔāl.
NEG-answered.3S NCI-DET student the-question
'No student answered the question.'

b. Maryam *(ma)-ħallat **wala** suʔāl.
Mary NEG-answered.3SF NCI-DET question
'Mary did not answer any question.'

The scalar focus particle *wala* can morphologically be decomposed into the conjunction particle *wa* 'and' and the negative morpheme *lā* 'no'. Like the scalar focus particle *walaw* discussed in section 3.1.2, *wala* specifies its associate as the low endpoint on a pragmatic scale. The inclusion of *lā* with the scalar focus particle *wala* would force us to assume that *wala* incorporates a negation marker and hence is semantically and formally negative. However, the negative morpheme included in *wala* is independent of the morpheme *ma-* 'not' that is used to

express sentence negation. The morpheme *lā* is used to express negative imperatives and discourse negation:

(29) **lā** təbki.
no cry.3S
'Don't cry.'

(30) A: ʃtarēt sayyārah?
bought.3SM car
'Have you bought a car?'

B: **lā**.
no
'No.'

This said, *wala* is better viewed as a scalar particle rather than a simple negation marker. This conclusion is supported by the fact that *wala* is identical to the disjunction or additive particle meaning 'nor, not even' in the language:

(31) lā Maryam **wala** Salwa nad͡ʒaħan fi-l-mtiħān.
neither Mary nor Salwa passed.3PF in-the-test
'Neither Mary nor Salwa passed the test.'

The derivation of an NSI from a disjunction or additive particle meaning 'nor, not even' is well-attested in the world's languages (Haspelmath 1997). Some examples are listed below:

(32)

Russian	**ni**-kto 'nobody'	ni 'nor, not even'
Classical Greek	**oud**-eís 'nobody'	oudé 'nor, not even'
Hungarian	**sem**-mi 'nothing'	sem 'nor, not even'

Albanian	**as**-njeri ‘nobody’	as ‘nor, not even’
Ancash Quechua	**ni**-ima ‘nothing’	ni ‘nor, not even’
Mansi	**nem**-xotti ‘nobody’	nem ‘nor, not even’
Romanian	**nici**-un ‘no’	nici ‘nor, not even’

(Haspelmath 1997: 222-223)

Like the case with JA *wala*, the focus particles listed above include a negative morpheme that is different from the verbal negator used for sentence negation. Further, some of these particles are identical in their morphological composition to JA *wala* in the sense that they involve the conjunction ‘and’ and the negative morpheme ‘no’:

(33)

Latin	neque, nec ‘nor, not even’	ne ‘not’ + -que ‘and’ (Hoyt 2010)
Classical Greek	oute ‘not even’	ou ‘not’ + -te ‘and’ (Giannakidou 2007)
Hungarian	sem ‘nor, not even’	is ‘and, also’ + nem ‘not’) (van Craenenbroeck and Lipták 2006)

The negative-fragment-answer-diagnostic confirms that *wala*-phrases are NCIs rather than NPIs in JA. *Wala*-phrases can be used to provide a negative fragment answer in the language as shown in the following example:

(34) A: mīn d͡ʒa?
who came.3S
‘Who came?’

B: **wala** wāḥad.
NCI-DET one
‘No one.’

3.2.2 Adverbial NCIs

Adverbial NCIs in JA can be classified into two types. These include the *never*-words and the *not-yet*-words (cf. Hoyt 2010).

3.2.2.1 The Never-words

The *never*-words include the indefinite temporal adverbs *bilmarrah* 'never, not at all', *nəhāʔyyan* 'never, not at all', and *ʔabadan* 'never, not at all' as shown in the following examples:

(35) Maryam *(ma)-btōkil tuffāħ **bilmarrah**.
Mary NEG-eat.3SF apples NCI-time
'Mary does not eat apples at all.'

(36) Maryam *(ma)-btiʃrab ħalīb **nəhāʔyyan**.
Mary NEG-drink.3SF milk NCI-time
'Maryam does not drink milk at all.'

(37) Maryam *(ma)-biṯħib l-mōz **ʔabadan**.
Mary NEG-like.3SF the-bananas NCI-time
'Mary does not like bananas at all.'

All these three adverbials are etymologically derived from either maximal-unit or minimal-unit expressions. The adverbial *bilmarrah* is a prepositional phrase that consists of the preposition *b-* 'in', the definite article *l-* 'the', and the minimal-unit noun *marrah* 'once'. The adverbial *nəhāʔyyan* consists of the maximal-unit adjective *nəhāyy* 'final' and the adverbial marker *-an*. The adverbial *ʔabadan* consists of the maximal-unit noun *ʔabad* 'eternity' and the adverbial marker *-an*.

The *never*-words can be used to provide a negative fragment answer and hence they should be classified as NCIs rather than NPIs:

(38) A: btiʃrab gahwah?
drink.2SM coffee
'Do you drink coffee?'

B: **bilmarrah**.
NCI-time
'Not at all.'

(39) A: biddaxin?
smoke.2SM
'Do you smoke?'

B: **nəhāʔyyan**.
NCI-time
'Not at all.'

(40) A: bitħib t-tuffāħ?
like.2SM the-apples
'Do you like apples?'

B: **ʔabadan**.
NCI-time
'Not at all.'

The expressions *nəhāʔyyan* and *ʔabadan* are borrowed from Standard Arabic and are less frequent in the language than the expression *bilmarrah*. The choice among these expressions is subject to sociolinguistic factors such as education, social class, and prestige. The expressions *nəhāʔyyan* and *ʔabadan* are prestigious forms that are used by educated people and people of the higher class in formal settings.

3.2.2.2 The Not-yet-words

The *not-yet*-words include the indefinite temporal adverbs *laħaddəlʔān* 'not yet', *lahassa* 'not yet', and *baʕid* 'not yet' as shown in the following examples:

(41) Maryam *(ma)-ʃtarat l-ktāb **laħaddəlʔān**.
Mary NEG-bought.3SF the-book NCI-time
'Mary has not bought the book yet.'

(42) Maryam *(ma)-ħallat l-wād͡ʒib **lahassa**.
Mary NEG-answered.3SF the-assignment NCI-time
'Mary has not answered the assignment yet.'

(43) Maryam **baʕid**-ha *(ma)-ʃarəbt l-ħalīb.
Mary NCI-time-her NEG-drank.3SF the-milk
'Mary has not drunk the milk yet.'

Like some of the *never*-words and other NSIs in JA, the *not-yet*-words derive etymologically from maximal-unit expressions. The adverbial *laħaddəlʔān* is a prepositional phrase involving the preposition *la-* 'to, until', the noun *ħadd* 'extent', and the adverb *lʔān* 'now'. The adverbial *lahassa* is also a prepositional phrase involving the preposition *la-* 'to, until' and the adverb *hassa* 'now'. The adverbs *lʔān* and *hassa* that are involved in these expressions stand for English 'now' and can be considered as maximal-unit expressions denoting the high endpoint on a temporal scale. The adverbial *baʕid* derives from the expression that stands for English 'after' in the language:

(44) Maryam txarrad͡ʒat **baʕid** xams snīn.
Mary gradauted.3SF after five years
'Mary graduated after five years.'

This sentence shows that *baʕid* can function as a maximal-unit expression denoting the high endpoint on a temporal scale.

As it is the case with *wala*-phrases and the *never*-words, the negative-fragment-answer-diagnostic confirms that the *not-yet*-words are NCIs rather than NPIs in the language. The *not-yet*-words can be used to provide a negative fragment answer as shown in the following examples:

(45) A: Salwa waṣlit?
Salwa arrived.3SF
'Has Salwa arrived?'

B: **laħaddəlʔān**.
NCI-time
'Not yet.'

(46) A: Maryam ṭalaʕat?
Mary left.3SF
'Has Mary left?'

B: **lahassa**.
NCI-time
'Not yet.'

(47) A: Salma ħakat?
Salma called.3SF
'Has Salma called?'

B: **baʕid-ha**.
NCI-time-her
'Not yet.'

All of the *not-yet*-words can occasionally occur in positive contexts with the meaning of 'still' or 'so far' as shown in the following examples:

(48) Maryam akalat θalaθ tuffāħāt **laħaddəlʔān**.
Mary ate.3SF three apples so-far
'Mary has eaten three apples so far.'

(49) Maryam ħallat ʔarbaʕ ʔassʔəlih **lahassa**.
Mary answered.3SF four questions so-far
'Mary has answered four questions so far.'

(50) Maryam **baʕid**-ha sāknih fi-ʔamrīka.
Mary still-her live.3SF in-America
'Mary still lives in America.'

We have previously seen examples of NSIs that still can appear in contexts that are not typical NSIs licensing contexts such as simple affirmative declarative sentences. We have also pointed out that this does not weaken the status of these items as NSIs. Such items are so prevalent in the world's languages; they are analyzed as semi-NSIs undergoing grammaticalization (Hoeksema 1994).

To sum up, two types of NCIs have been uncovered in JA. These include determiner and adverbial NCIs as shown in the following table:

Table 2: NCIs in JA: determiner and adverbial NCIs

Determiner NCIs	Adverbial NCIs	
	The *never*-words	The *not-yet*-words
wala 'even, at least'	bilmarrah 'never, not at all' nəhāʔyyan 'never, not at all' ʔabadan 'never, not at all'	laħaddəlʔān 'not yet' lahassa 'not yet' baʕid 'not yet'

The etymology of these items has been explored. Like NPIs, all of these items derive from an expression with a scalar denotation. The status of these items as NCIs rather than NPIs was tested against their ability to provide negative fragment answers. In contrast to NPIs, all of the items listed in Table 2 above can be used to provide a negative fragment answer in the language.

3.3 NPIs vs. NCIs in JA: Distributional Differences

In this section, I address important distributional differences between NPIs and NCIs in JA. Although NPIs and NCIs in JA seem to form a natural class in the sense that both sets of items show a certain affinity to negation, they also show some distributional differences call for different analyses for these two sets of NSIs.

One important contrast between these two sets of NSIs is that, in contrast to NPIs, NCIs need not always be accompanied with a negative marker; NCIs can sometimes appear by themselves and contribute negation on their own as in fragment answers and in preverbal position as shown in the following examples:

(53) A: mīn d͡ʒa?
who came.3S
'Who came?'

B: **wala** wāḥad.
NCI-DET one
'No one.'

B': ***walaw** wāḥad.
even one
'Anyone. '

(54) a. **wala** ṭālib d͡ʒa.
NCI-DET student came.3S
'No student came.'

b. **walaw** ṭālib *(ma)-d͡ʒa.
NCI-DET student NEG-came.3S
'Even (one) student did not come.'

The contrast in (53) shows that the NCI *wala* can provide a negative fragment answer where it can contribute negation on its own without being accompanied by a negative marker; whereas the NPI *walaw* cannot do so. Likewise, the contrast in (54) shows that the NCI *wala* can appear by itself in preverbal position and contribute negation on its own without being accompanied by a negative marker; whereas the NPI *walaw* cannot do so.

A further important contrast between NPIs and NCIs is that their licensing is subject to different locality restrictions. While NPIs can be licensed by superordinate negation (i.e.

negation in a higher clause), long-distance licensing is not possible for NCIs. Consider the following contrast:

(55) a. Maryam *(ma)-gālat ʔənn-ha ħallat **walaw** suʔāl.
Mary NEG-said.3SF that-her answered.3SF.IND even question
'Mary did not say that she answered any question.'

b.*Maryam ma-gālat ʔənn-ha ʃtarat **wala** ktāb.
Mary NEG-said.3SF that-her bought.3SF.IND NCI-DET book
'Mary did not say that she bought any book.'

The NPI *walaw* is acceptable with superordinate negation (55a); whereas the NCI *wala* is not (55b). This contrast between NPIs and NCIs regarding their licensing domain suggests that these two sets of NSIs are subject to different licensing conditions.

It is worth pointing out here that the contrast in the locality restrictions of NPI licensing and NCI licensing crucially depends on the presence of the indicative mood in the embedded clause: only NPIs can be licensed long-distance if they are embedded in a clause that is in the indicative mood. This contrast in the locality restrictions of NPI licensing and NCI licensing breaks down in embedded clauses that are in the subjunctive mood: both NPIs and NCIs can be licensed long-distance in embedded clauses that are in the subjective mood as shown in the following examples:

(56) a. Maryam *(ma)-biddha təʃtari **walaw** ktāb.
Mary NEG-want.3SF buy.3SF.SUBJ even book
'Mary does not want to buy any book.'

b. Maryam *(ma)-biddha təʃtari **wala** ktāb.
Mary NEG-want.3SF buy.3SF.SUBJ NCI-DET book
'Mary does not want to buy any book.'

These examples show that both the NPI *walaw* and the NCI *wala* can be licensed by a negative marker in a higher clause when they are embedded in a clause that is in the subjunctive mood.

NPIs and NCIs also contrast with respect to their distribution in negative-like contexts (i.e. contexts that are in some sense negative although they do not involve a sentential negative marker). In addition to overt negation, NSIs have been shown to be grammatical in a number of negative-like contexts. These contexts include *without*-clauses, *before*-clauses, wh-questions, yes/no questions, the protasis of conditionals, the restriction of universal quantifiers, adversative predicates, habituals, future sentences, modal verbs, subjunctives, imperatives, disjunctions, too-clauses, as-if-clauses, and downward entailing operators. (Ladusaw 1980; Linebarger 1980; Progovac 1994; Giannakidou, 1998, among others). NPIs and NCIs in JA do not pattern together with regard to their distribution in these negative-like contexts: while NPIs are grammatical in all these contexts, NCIs are grammatical in only a subset of these contexts, namely *without*-clauses and *before*-clauses. Consider the following contrast from JA:

(57) *Without*-clauses

Maryam ṭalaʕat bidūn ma təħki **walaw/wala** kilmih.
Mary left.3SF without COMP. say.3SF even/NCI-DET word
'Mary left without saying any word.'

(58) B*efore*-clauses

Maryam ṭalaʕat gabil ma tʤāwib **walaw/wala** suʔāl.
Mary left.3SF before COMP. answer.3SF even/NCI-DET question
'Mary left before answering any question.'

(59) Adversative predicates

Maryam ankarat ʔənn-ha ħakat **walaw/*wala** kilmih.
Mary denied.3SF that-her said.3SF even/NCI-DET word
'Mary denied that she said any word.'

(60) wh/questions

mīn ħaka **walaw/*wala** kilmih?
who said.3S even/NCI-DET word
'Who said any word?'

(61) Yes/no questions[5]

Maryam ħakat **walaw/*wala** kilmih?
Mary said.3SF even/NCI-DET word
'Did Mary say any word?'

(62) The protasis of conditionals

iða Maryam ħallat **walaw/*wala** suʔāl, raħ tənd͡ʒaħ.
if Mary answered.3SF even/NCI-DET question, will pass.3SF
'If Mary answers any question, she will pass.'

(63) The restriction of universal quantifiers

kul ṭālib ħall **walaw/*wala** suʔāl, raħ yənd͡ʒaħ.
every student answered.3S even/NCI-DET question will pass.3S
'Every student who answered any question will pass.'

(64) Habituals

Maryam dāyman btigra **walaw/*wala** qiṣṣah gabil ma tnām.
Mary usually read.3SF even/NCI-DET story before COMP. sleep.3SF
'Mary usually reads at least one story before she sleeps.'

[5] Rhetorical questions in JA also show the same contrast between NPIs and NCIs: only NPIs are acceptable in rhetorical questions in JA as shown in the following examples:

(1) ʔənt btitwaqaʕ ʔənno Maryam ħallat **walaw/*wala** suʔāl?
you think.3SM that Mary answered.3SF even/NCI-DET question
'Do you think that Mary answered any question?'

(2) hū min ktēh Maryam btiʕrif təħki **walaw/*wala** kilmit ʔəngəlīzi?'
Q from when Mary know.3SF speak.3SF even/NCI-DET word English
'Since when does Mary know how to speak any English word?'

(65) Future Sentences

Maryam raħ tħill **walaw/*wala** suʔāl.
Mary will answer.3SF even/NCI-DET question
'Mary will answer at least one question.'

(66) Modal verbs

Maryam yəmkin tħill **walaw/*wala** suʔāl.
Mary may answer.3SF even/NCI-DET question
'Mary may answer at least one question.'

(67) Subjunctives

batmanna ʔənnu Maryam tħill **walaw/*wala** suʔāl.
hope.1S that Mary answer.3SF even/NCI-DET question
'I hope that Mary would answer at least one question.'

(68) Imperatives

ħill **walaw/*wala** suʔāl.
answer.3SM even/NCI-DET question
'Answer at least one question.'

(69) Disjunctions

ʔəmmainnu Maryam tħill **walaw/*wala** suʔāl, ʔaw ʔənn-ha raħ tərsib.
either that Mary answer.3SF even/NCI-DET question, or that-her will fail.3SF
'Either Mary answers any question, or she will fail.'

(70) *Too*-clauses

l-mtiħān ʔaṣʕab min ʔənnu Maryam tħill **walaw/*wala** suʔāl.
the-exam too-difficult from that Mary answer.3SF even/NCI-DET question.
'The exam is too difficult for Mary to answer any question.'

(71) *A-if*-clauses

Maryam btitṣaraf wa-kaʔin-ha ħallat **walaw/*wala** suʔāl.
Mary behave.3SF and-as-her answered.3SF even/NCI-DET question
'Mary behaves as if she has answered any question.'

(72) Downward entailing DPs

ṭulāb galīlīn ħallu **walaw/*wala** suʔāl fi-l-mtiħān.
students few answered.3P even/NCI-DET question in-the-exam
'Few students answered any question in the exam.'

These examples show that while the NPI *walaw* is licensed in all of the negative-like contexts above, the NCI *wala* is licensed in only a subset of these contexts, namely *without*-clauses and *before*-clauses. A comparative distribution of NPIs and NCIs in all of the contexts discussed so far is given in Table 3 below:

Table 3: Comparative distribution of NPIs and NCIs in JA

Environment	NPIs	NCIs
Clause-mate negation	Yes	Yes
Without-clauses	Yes	Yes
Before-clauses	Yes	Yes
Superordinate negation (subjunctive mood)	Yes	Yes
Superordinate negation (indicative mood)	Yes	No
Adversative predicates	Yes	No
Wh-questions	Yes	No
Yes/no questions	Yes	No
The protasis of conditionals	Yes	No
The restriction of universal quantifiers	Yes	No
Habituals	Yes	No
Future sentences	Yes	No
Modal verbs	Yes	No
Subjunctives	Yes	No
Imperatives	Yes	No
Disjunctions	Yes	No
Too-clauses	Yes	No
As-if-clauses	Yes	No
Downward entailing DPs	Yes	No

3.4 Summary and Conclusion

This chapter has reviewed expressions that function as NSIs in JA. JA exhibits both types of NSIs that are discussed in the literature: NPIs and NCIs. NPIs and NCIs in JA derive from maximal-unit or minimal-unit expressions that give rise to scalar implications. The negative-fragment-answer-diagnostic, which is widely accepted as a test that distinguishes NPIs from NCIs, shows that while NCIs in JA can provide negative fragment answers, NPIs cannot do so.

In addition to the differences in their ability to provide negative fragment answers, NPIs and NCIs in JA exhibit other important distributional differences. First, while some preverbal NCIs can contribute negation on their own without being accompanied by a negative marker, NPIs can never do so. Second, while NPIs can be licensed by distant negation regardless of whether their embedding clause is in the indicative or the subjunctive mood, NCIs can only be licensed long-distance when their embedding clause is in the subjunctive mood. Finally, while NPIs are grammatical in a number of negative-like contexts, NCIs are grammatical in only a subset of these contexts.

Chapter Four

The Licensing of Negative Polarity Items in Jordanian Arabic

This chapter discusses the licensing of the set of NSIs that function as NPIs in JA. NPIs in JA will be discussed in light of previous theories of NPI licensing. The theories discussed here will make very clear how complex the issues that surround NPI licensing are. This complexity is most evident in the diversity of the restrictions that different theories propose on NPI licensing. These restrictions range from syntactic constraints to semantic and even pragmatic constraints. The basic premises of each of these theories will be introduced and tested against data from JA. The discussion will show that a theory that is based on the semantic notion of (non-)veridicality fares better than all of the other theories presented here in accounting for the distribution of NPIs in JA.

4.1Theories of NPI Licensing

The study of NPI licensing has received a lot of attention in the linguistics tradition. Research on NPI licensing has been occupied by two questions. The first question concerns the elements that can license NPIs (i.e. the licenser question). We have previously seen that NPIs in, for example, JA are acceptable in a number of apparently unrelated contexts such as overt negation, questions, the protasis of conditionals, the restriction of universal quantifiers, among other. The challenge here has been to find out how these apparently unrelated contexts can form a natural class. The second question concerns the relation that should hold between an NPI and its licenser if any (i.e. the licensing relation question).

This chapter introduces the most influential theories of NPI licensing and evaluates them in light of data from JA. Subsection 4.1.1 discusses the Surface Structure Approach of Lasnik

(1975) and Jackendoff (1969, 1972). Subsection 4.1.2 discusses the Downward Entailment Approach of Ladusaw (1980, 1982, 1983). Subsection 4.1.3 addresses the Negative Implicature Approach of Linebarger (1981, 1987). Subsection 4.1.4 discusses the Binding Approach of Progovac (1988, 1993, 1994). Subsection 4.1.5 discusses the (Non-)veridicality Approach of Giannakidou (1998, 1999, 2000, 2002, 2006, 2011).

4.1.1 The Surface Structure Approach

The theories discussed in this subsection were not directly meant to account for the distribution of NPIs. They attempted to account for the scope of negation, especially the sentential negative morpheme *not* in English. However, these theories show that the distribution of NPIs can be used as a diagnostic of the scope of negation. These theories argue that a position where an NPI can occur in a sentence is a position that is necessarily in the scope of negation.

4.1.1.1 Lasnik (1975)

Lasnik (1975) uses a non-referential reading of logical elements (i.e. expressions that can enter into scope ambiguities) as a diagnostic of the scope of negation. He notices that logical elements such as quantified expressions can have a referential and a non-referential reading as shown in the following examples:

(1) a. **Many people** did not come to the party.

b. **Many people** (namely, John, Bill, Mary, etc.) did not come to the party.

c. **They** did not know about it.

(2) a. Not **many people** came to the party.

b.*Not **many people** (namely, John, Bill, Mary, etc.) came to the party.

c.***They** did not know about it.

(3) a. I did not see **many people**.

b. I did not see **many people** (namely, John, Bill, Mary, etc.).

c. I miss **them** too much.

The quantified expression *many people* in (1a) is argued to be a referential expression in the sense that it can be expanded by *namely* (1b), and in the sense that it can serve as an antecedent for a personal pronoun (1c). The quantified expression *many people* in (2a), on the other hand, is argued to be non-referential in the sense that it cannot be expanded by *namely* (2b), and in the sense that it cannot serve as an antecedent for a personal pronoun (2c). In addition, the quantified expression *many people* in (3a) is argued to have a referential reading and a non-referential reading of which only the referential reading can be expanded by *namely* (3b), and serve as an antecedent for a personal pronoun (3c). The same patterns have been shown to exist for all logical elements that can enter into scope ambiguities such as quantificational adverbs and *because*-clauses.

Lasnik assumes that the non-referential reading of logical elements such as the quantified expressions in the examples above is the result of occurrence in the scope of negation. He proposes that the scope of negation can be determined by the 'Not Scope Rule'. This rule assigns the feature '+negated' to logical elements which are then assigned the value '-referential' by a redundancy rule. The redundancy rule assigns the value '-referential' to anything that is marked

as '+negated'. The 'Not Scope Rule' is assumed to assign the feature '+negated' to logical elements under two conditions:

(1)

The 'Not Scope Rule' obligatorily assigns the feature '+negated' to logical elements that are commanded and immediately preceded by *not* at surface structure. This condition is illustrated in (2) above. This condition predicts that logical elements such as *some* and *several*, which are assumed to be inherently marked as '+referential', cannot be immediately preceded by *not*. This prediction is borne out as shown in the following examples:

(4) *Not **some of the questions** were answered.

(5) *Not **several of the questions** were answered.

Some and *several* are commanded and immediately preceded by *not* in these examples, and hence they are obligatorily marked as '+negated' by the 'Not Scope Rule' and as '-referential' by the redundancy rule. Consequently, the inherent '+referential' value and the assigned '-referential' value will disagree and lead to ungrammaticality.

(2)

The 'Not Scope Rule' optionally assigns the feature '+negated' to logical elements if they are commanded by and to the right of (not immediately preceded by) *not* at surface structure, and if they are in the same intonational phrase as *not*. This condition is illustrated in (3) above.

These conditions on the applicability of the 'Not Scope Rule' predict that NPIs like *any*, which are assumed to be inherently marked as '-referential', can only appear in a position that is

commanded and to the right of a negative marker at surface structure, and in the same intonational phrase with it. This prediction is borne out as shown in the following examples:

(6) a. I did not see **anyone**.

b.***Anyone** did not come.

According to the 'Not Scope Rule', Sentence (6a) is grammatical as the NPI *any* follows the negative morpheme *not* at surface structure and thus it can be marked as '+negated' and '-referential'; whereas sentence (6b) is ungrammatical as the NPI *any* precedes the negative morpheme *not* at surface structure and thus cannot be marked as '+negated' and '-referential'.

4.1.1.2 Jackendoff (1969, 1972)

Jackendoff (1969) proposes an interpretive rule to capture the scope of negation. This interpretive rule raises negation from its base-generated position (i.e. the VP), over which it always has scope, to the S-node where it can take sentence scope. This interpretive rule can be blocked by a quantifier in subject position as shown in the following examples:

(7) **Some students** did not pass.

(8) **Many students** did not pass

(9) ***Any student** did not pass.

Jackendoff argues that negation in sentences like (7), (8), and (9) can take only VP scope but never sentence scope. One piece of evidence that he offers in support of his argument is that these sentences are not acceptable with *neither*-tags as shown in the following example:

(10) *Some students did not pass, **and neither did John**.

Jackendoff assumes that *neither*-tags are acceptable only when negation has sentence scope. The restriction of the negative to VP scope in sentences with a quantifier in subject position like (7), (8), and (9) above is ascribed to a condition that requires the leftmost logical element in a sentence to move to the S-node first. Thus, the S-node in (7), (8), and (9) is already filled with the quantified expressions *some students*, *many students*, and *any student* respectively, thus restricting the negative to VP scope. The ungrammaticality of sentence (9) as opposed to the grammaticality of sentence (7) and sentence (8) is ascribed to an additional condition that requires NPIs like *any* in English to be in the scope of negation.

Jackendoff (1972) later acknowledges that his theory is not adequate. For example, it cannot account for the fact that the negative morpheme does not have to have scope over a direct object in the same VP as shown in the following example:

(11) a. I did not give any student **several of the questions**.

b. There were several questions that I did not give any student.
SEVERAL NOT ANY STUDENT

c. There was not any student who I gave several questions to.
NOT ANY STUDENT SEVERAL

Jackendoff's interpretive rule of the scope of negation falls short of accounting for the fact that sentence (11a) can have the interpretation in (11b) where the direct object *several of the questions* is outside the scope of negation. This interpretive rule predicts that (11b) is not a possible reading of (11a) as there is no node that the negative morpheme can move to so it can have *any student* but not *several of the questions* in its scope. Consequently, Jackendoff (1972) modified his theory of the scope of negation in a way that is very similar to Lasnik's theory. He

argued that the scope of negation optionally includes every element that is preceded and commanded by the negative operator at surface structure.

JA raises different problems with the Surface Structure Accounts of NPI licensing presented above. First, these accounts do not distinguish between NPIs and NCIs, and therefore they fail to capture the distinction between the two sets of NSIs in JA. We have seen that NSIs in JA should be classified into NPIs and NCIs based on well-established tests. The Surface Structure Accounts do not offer any mechanism to deal with the distributional differences observed between NPIs and NCIs in JA. For example, these accounts fall short of accounting for the fact that some NSIs are clause-bound; whereas others are not.

Second, the Surface Structure Accounts limit themselves to the distribution of NPIs in contexts with overt sentential negative markers. We have seen that NPIs are licensed in a number of negative-like contexts (i.e. contexts that are in some sense negative although they do not involve a sentential negative marker) such as questions, conditionals, adversative predicates, to name a few.

Third, and most importantly, JA raises a serious challenge with regard to the precedence condition these accounts propose on the licensing of NPIs. Data from JA show that NPIs can precede negation in the language as shown in the following examples:

(12) a. **walaw** ṭālib *(ma)-ħall s-suʔāl.
even student NEG-answered.3S the-question
'Even (one) student did not answer the question.'

b. **walaw** suʔāl Maryam *(ma)-ħallat-(uh).
even question Mary NEG-answered.3SF-(it)
'Mary did not answer any question.'

(13) **ʕumur** Maryam *(ma)-ħallat l-wād͡ʒib.
ever Mary NEG-answered.3SF the-assignment
'Mary has not ever answered the assignment.'

(14) **fils aħmar** Maryam *(ma)-ṣarafat-(uh).
cent red Mary NEG-spent.3SF-(it)
'Mary did not spend a red cent.'

These examples show that three elements that have been identified as NPIs in JA, namely the scalar focus particle *walaw*, the indefinite temporal adverb *ʕumur*, and the idiomatic expression *fils aħmar* can precede negation in the surface syntax. These sentences constitute a direct violation of any surface structure c-command condition on NPI licensing.

It is worth mentioning at this point that not all NPIs can precede negation in JA. NPIs that cannot precede negation in JA include the indefinite pronouns *ħada* 'anyone' and *iʃi* 'anything', and indefinite-*ʔayy*-DPs as shown in the following examples:

(15) a. ***ħada** ma-d͡ʒa.
one NEG-came.3S
'No one came.'

b. ***ħada** Maryam ma-ʃāfat-(uh).
one Mary NEG-saw.3SF-him
'Mary did not see anyone.'

(16) a. ***iʃi** ma-ṣār.
thing NEG-happened.3S
'Nothing happened.'

b. ***iʃi** Maryam ma-akalat-(uh).
thing Mary NEG-ate.3SF-(it)
'Mary did not eat anything.'

(17) a. ***ʔayy** ṭālib ma-ħall s-suʔāl.
which student NEG-answered.3S the-question
'No student answered the question.'

b. ***ʔayy** suʔāl Maryam ma-ħallat-(uh).
which question Mary NEG-answered.3SF-(it)
'Mary did not answer any question.'

Thus, NPIs in JA exhibit a contrast with regard to their surface structure position. Some NPIs (namely, *walaw*-phrases, *ʕumur,* and *fils aħmar*) can appear in a preverbal (pre-negative) position as well as a post-verbal (post-negative) position; whereas other NPIs (namely, *ħada*-NPs, *i/i*-NPs, and indefinite-*ʔayy*-DPs) can only appear in a post-verbal (post-negative) position. We will come back to this contrast in the distribution of NPIs in JA later in this chapter. There, we will see that NPIs that are restricted to a post-verbal position can, in fact, occur preverbally when they are embedded in a larger constituent.

In sum, the accounts presented in this subsection propose that NPIs need to be in the c-command domain of a negative marker in the surface syntax. These accounts confuse NPIs with NCIs and mainly focus on the distribution of NSIs in English. They also consider the distribution of NPIs in contexts with overt sentential negative markers and do not commit themselves to the distribution of NPIs in negative-like contexts. Data from JA has shown that these accounts do not extend to NPIs in the language. NPIs in JA can surface in a preverbal position where they precede their licenser. The following subsection presents an alternative account of NPI licensing in terms of the semantic notion of downward entailment.

4.1.2 The Downward Entailment Approach

Ladusaw (1980, 1982, 1983) assumes that the licensing of NPIs is a purely semantic phenomenon. His analysis is mainly proposed to account for the distribution of NPIs in English.

However, this analysis is claimed to work cross-linguistically. Ladusaw proposes that NPIs are licensed in the scope of expressions that denote downward entailing functions as opposed to upward entailing and non-monotone functions. Downward entailing functions are order reversing and closed under subsets; whereas upward entailing functions are order preserving and closed under supersets as illustrated in the following definitions:

(18) Downward entailing functions:

A function is downward entailing iff for every arbitrary element X, Y it holds that:
$X \subseteq Y \rightarrow f(Y) \subseteq f(X)$

(19) Upward entailing functions:

A function is upward entailing iff for every arbitrary element X, Y it holds that:
$X \subseteq Y \rightarrow f(X) \subseteq f(Y)$

Downward entailing functions allow inferences from supersets to subsets in their scope and hence they are downward monotone. Upward entailing functions, on the other hand, allow inferences from subsets to supersets and hence they are upward monotone. Thus, in downward entailing contexts, expressions denoting supersets can be substituted by expressions denoting subsets without changing the truth of the proposition. In upward entailing contexts, on the other hand, expressions denoting subsets can be substituted by expressions denoting supersets and not change the truth of the proposition.

Accordingly, negation and the restriction of universal quantifiers, for example, are downward entailing contexts and hence they license NPIs in their scope as shown in the following examples:

(20) a. Sarah does not own **a car**. ⟶

b. Sarah does not own **a Mercedes**.

(21) a. Every student who owns **a car** will drive to the conference. ⟶

b. Every student who owns **a Mercedes** will drive to the conference.

(22) a. Sarah does not own **any car**.

b. Every student who owns **any car** will drive to the conference.

Sentence (20a) downward entails sentence (20b) as it allows for the substitution of supersets (car) by subsets (Mercedes). Likewise, sentence (21a) downward entails sentence (21b) as it allows for the substitution of supersets (car) by subsets (Mercedes). Thus, negation and the restriction of universal quantifiers are downward entailing functions, thus they license NPIs in their scope as shown in (22a) and (22b) respectively above.

In contrast, affirmative sentences and the restriction of existential quantifiers are upward entailing rather than downward entailing functions, thus they do not license NPIs in their scope as shown in the following examples:

(23) a. Sarah owns **a Mercedes**. ⟶

b. Sarah owns **a car**.

(24) a. Some students who own **a Mercedes** will drive to the conference. ⟶

b. Some students who own **a car** will drive to the conference.

(25) a. *Sarah likes **any car**.

b. *Some students who own **a car** will drive to the conference.

Sentence (23a) upward entails sentence (23b) as it allows for the substitution of subsets (Mercedes) by supersets (car). Likewise, sentence (24a) upward entails sentence (24b) as it allows for the substitution of subsets (Mercedes) by supersets (car). Thus, affirmative sentences and the restriction of existential quantifiers are upward entailing rather than downward entailing contexts, therefore they do not license NPIs in their scope as shown in (25a) and (25b) respectively above.

As discussed above, entailment functions can be downward entailing, upward entailing, or non-monotone. Non-monotone functions are functions that do not support inferences in either direction and hence they do not license NPIs in their scope. Quantifiers like *exactly n*(umber) *N*(oun) are non-monotone as shown in the following examples:

(26) a. Exactly three students like **linguistics**. $\not\rightarrow$

b. Exactly three students like **semantics**.

(27) a. Exactly three students like **semantics**. $\not\rightarrow$

b. Exactly three students like **linguistics**.

(28) *Exactly three students like **any linguist**.

Sentence (26a) does not downward entail sentence (26b) as it does not allow for the substitution of supersets (linguistics) by subsets (semantics). Likewise, sentence (27a) does not upward entail sentence (27b) as it does not allow for the substitution of subsets (semantics) by supersets (linguistics). Thus, quantifiers like *exactly n N* are non-monotone in the sense that they do not allow for inferences either from supersets to subsets or from subsets to supersets, therefore they do not allow NPIs in their scope as shown in (28) above.

Ladusaw argues that downward entailment is the necessary condition for the licensing of NPIs. This condition is stated in (29) below:

(29) Ladusaw's NPI licensing condition:

α is a trigger for NPIs in its scope iff α is downward entailing.

This condition predicts that NPIs are triggered (i.e. licensed) by an expression α if α is downward entailing. If α is upward entailing or non-monotone, it will not trigger NPIs. Consequently, in addition to negation and the restriction of universal quantifiers, the condition in (29) correctly predicts the grammaticality of NPIs in other downward entailing contexts such as the protasis of conditionals, the complement of adversative predicates, *without*-clauses, *before*-clauses, among others.

For counter examples like (30) below, Ladusaw proposes a secondary syntactic constraint that requires the licenser to c-command the licensee at surface structure when both occur in the same clause.

(30) ***Any student** did not come.

Here, the NPI *any student* is in the logical scope of negation, which is a downward entailing function. However, the sentence is ungrammatical as the licenser (negation) does not c-command the licensee (any student) at surface structure.

The Downward Entailment Approach suffers a number of problems. First, like the Surface Structure Accounts discussed in the previous subsection, the Downward Entailment Approach confuses NPIs with NCIs. In other words, this approach conceives of any element in the language that is sensitive to the presence of negation as an NPI. We have seen that NSIs in

JA exhibit a number of distributional differences and thus they should be classified into NPIs and NCIs.

Second, JA poses a serious challenge for the surface structure condition this approach proposes on the licensing of NPIs. We have seen in the previous subsection that NPIs in JA can precede negation at surface structure even when they co-occur with that licenser in the same clause. The relevant examples are repeated below:

(31) a. **walaw** ṭālib *(ma)-ħall s-suʔāl.
even student NEG-answered.3S the-question
'Even (one) student did not answer the question.'

b. **walaw** suʔāl Maryam *(ma)-ħallat-(uh).
even question Mary NEG-answered.3SF-(it)
'Mary did not answer any question.'

(32) **ʕumur** Maryam *(ma)-ħallat l-wād͡ʒib.
ever Mary NEG-answered.3SF the-assignment
'Mary has not ever answered the assignment.'

(33) **fils aħmar** Maryam *(ma)-ṣarafat-(uh).
cent red Mary NEG-spent.3SF-(it)
'Mary did not spend a red cent.'

These examples show that the scalar focus particle *walaw*, the indefinite temporal adverb *ʕumur*, and the idiomatic expression *fils aħmar* can surface in a preverbal position where they precede their licenser. Notice here that the NPI and its licenser occur in the same clause. We will see later in this chapter that other NPIs in JA can also appear in a preverbal position when they are embedded in a larger constituent.

Third, and most importantly, the notion of downward monotonicity does not hold for all contexts that license NPIs in JA. In fact, a number of NPI licensing contexts in JA are not

downward monotone. Such contexts include interrogatives, habituals, future sentences and imperatives as shown in the following examples (cf. Giannakidou 1998, 2011):

(34) Maryam ħakat **walaw** kilmih?
Mary said.3SF even word
'Did Mary say any word?'

(35) Maryam dāyman btigra **walaw** qiṣṣah gabil ma tnām.
Mary usually read.3SF even story before COMP. sleep.3SF
'Mary usually reads at least one story before she sleeps.'

(36) Maryam raħ tħill **walaw** suʔāl.
Mary will answer.3SF even question
'Mary will answer at least one question.'

(37) ħill **walaw** suʔāl.
answer.3SM even question
'Answer at least one question.'

These examples show that the scalar focus particle *walaw* is acceptable with interrogatives (34), habituals (35), future sentences (36), and imperatives (37). The Downward Entailment Approach predicts these contexts to be downward entailing. This prediction is not borne out. Interrogatives, habituals, future sentences and imperatives are not downward entailing as illustrated in the following examples:

(38) a. Did you buy a **pet**? ⟶/

b. Did you buy a **cat**?

(39) a. I usually read a **story** before I go to bed. ⟶/

b. I usually read a **short story** before a go to bed.

(40) a. I will buy a **car**. ⟶/

b. I will buy a **Mercedes**.

(41) a. Buy **a car**. $\not\longrightarrow$

b. Buy **a Mercedes**.

The interrogative sentence (38a) does not downward entail sentence (38b) as it does not allow for the substitution of supersets (pet) by subsets (cat). The habitual sentence (39a) does not downward entail sentence (39b) as it does not allow for the substitution of supersets (story) by subsets (short story). The future sentence (40a) does not downward entail sentence (40b) as it does not allow for the substitution of supersets (car) by subsets (Mercedes). The imperative sentence (41a) does not downward entail sentence (41b) as it does not allow for the substitution of supersets (car) by subsets (Mercedes).

The Downward Entailment Analysis of NPI licensing presented in this subsection proposes that NPIs need to be in the logical scope of a downward entailing expression (i.e. an expression that allows inferences from supersets to subsets), and that an NPI needs to be in the c-command domain of that licensing expression when both the NPI and its licenser occur in the same clause. This analysis confuses NPIs with NCIs and focuses mainly on the distribution of NPIs in English. Data from JA has shown that the Downward Entailment Analysis is lacking. NPIs in JA have been shown to be acceptable in contexts that are not downward entailing such as interrogatives, habituals, future sentences, and imperatives. NPIs in JA have also been shown to be able to precede their licenser when both the NPI and its licenser occur in the same clause.

4.1.3 The Negative Implicature Approach

Linebarger (1981, 1987) proposes that it is negation rather than downward entailment that underlies the licensing of NPIs. Her analysis is mainly proposed to account for the distribution of NPIs in English. However, this analysis is claimed to work cross-linguistically. Linebarger's

theory is based on Baker (1970). Baker proposes the following condition on the licensing of NPIs:

(42) Baker's NPI licensing condition

(i) NPIs are appropriate within the scope of negations, whereas PPIs are appropriate elsewhere.
(ii) Given semantic representations P1 and P2 satisfying the following conditions:
(A) P1 = X1 Y Z1 and P2 = X2 Y Z2, where Y is itself a well-formed semantic representation;
(B) P1 entails P2;
Then the lexical representation appropriate to Y in P2 (by (i)) is also appropriate to Y in P1.

(Baker 1970: 47)

Thus, NPIs are licensed by negation rather than downward entailing functions. However, negation need not be overt in the sentence. NPIs are licensed either by overt negation (42i) or by a negative entailment of an affirmative sentence (42ii). Negative entailment accounts for the following example:

(43) a. Jack is surprised that Sam has **any** friends.

b. NEGATIVE ENTAILMENT: Jack expected that Sam would not have **any** friends.

The acceptability of the NPI *any* in (43a) is ascribed to the availability of the negative entailment in (43b) where *any* occurs in the scope of negation.

Linebarger adopts the essence of Baker's analysis. Her analysis has two parts: a syntactic part and a pragmatic part. The syntactic part concerns the cases of licensing in the presence of overt negation; whereas the second part concerns the cases of licensing in the absence of overt negation. The syntactic part involves a syntactic constraint, the 'Immediate Scope Constraint' (ISC), which applies at LF.

(44) Part A: The Immediate Scope Constraint (ISC):

> An NPI is acceptable in a sentence S if in the LF of S the subformula representing the NPI is in the immediate scope of the negation operator NOT. An element is in the immediate scope of NOT only if (1) it occurs in a proposition that is in the entire scope of NOT, and (2) within this proposition there are no logical elements intervening between it and NOT.
>
> (Linebarger 1987: 336)

The ISC states that NPIs are felicitous in a sentence if an NPI is in the immediate scope of negation at LF. Accordingly, an NPI must occur in a proposition that is in the entire scope of negation with no 'logical elements' intervening between the NPI and negation. Linebarger defines logical elements as elements that can enter into scope ambiguities. The ISC accounts for the following set of examples:

(45) He did not eat **anything**.

(46) a.*He did not **budge an inch** because she was pushed (but because he fell).

b. NOT CAUSE (S1, S2)
It is not true that S-1 causes S-2.

(47) a.*John did not give **a red cent** to every charity.

b. NOT $\forall_x$ (charity, x) (John gave a red cent to x)

According to the ISC, example (45) is grammatical as the NPI *any* occurs in the immediate scope of negation at LF with no intervening logical elements; whereas examples (46a) and (47a) are ungrammatical as logical elements intervene between negation and the NPIs *budge an inch* and *a red cent*, so that these NPIs are no more in the immediate scope of negation at LF. In (46a), the predicate CAUSE intervenes between the negative marker NOT and S-2 that contains the NPI

budge an inch. Likewise, in (47a), the universal quantifier ∀ intervenes between the negative marker NOT and the proposition containing the NPI *a red cent*.

The second part of Linbarger's analysis gives rise to pragmatic implicature and it concerns the cases of licensing in the absence of overt negation. In other words, this second part is proposed for cases that cannot be handled by the first part.

(48) Part B: Negative Implicature

(i) Expectation of negative implicature is itself a conventional implicature. An NPI contributes to a sentence S expressing a proposition P the conventional implicature that the following two conditions are satisfied.
(ii) There is some proposition NI (which may be identical to P) which is implicated or entailed by S and which is part of what the speaker is attempting to convey in uttering S. In the LF of some S' expressing NI, the lexical representation of the NPI occurs in the immediate scope of negation. In the event that S is distinct from S', we may say that in uttering S the speaker is making an allusion to S'.
(iii) NI strengthens P. The truth of NI, in the context of utterance, virtually guarantees the truth of P.

(Linbarger 1987: 346)

According to part B of Linebarger's analysis, NPIs are acceptable in affirmative sentences that involve inferences to a negative implicature. The availability of negative implicature accounts for the following example:

(49) a. I was surprised that she contributed **a red cent**.

b. NEGATIVE IMPLICATURE: I had expected her not to contribute a red cent.

Sentence (49a) is well-formed because it involves an inference to a pragmatic implicature (49b) where the NPI *a red cent* is in the immediate scope of the negative marker NOT.

The Negative Implicature Account has three major shortcomings. First, like the Surface Structure Accounts and the Downward Entailment Account, the Negative Implicature Account

fails to capture the differences between NPIs and NCIs. According to this account, every element that is sensitive to negation is an NPI and hence is subject to the same syntactic and pragmatic constraints this account proposes on the licensing of NPIs. However, this account does not say anything regarding the distributional differences between the two sets of NSIs that have been identified in the language. That is, it is not clear at all how this account can explain the distributional differences between NSIs in JA if all these items are NPIs and are subject to the same licensing constraints.

Second, the scope condition that this theory proposes on NPI licensing is lacking. This scope condition predicts that an NPI can surface anywhere in a given sentence as long as the NPI is in the immediate scope of negation. This scope condition does not extend to JA. For example, this scope condition predicts a sentence like (50) below to be grammatical, contrary to fact:

(50) ***ħada** ma-d͡ʒa.
one NEG-came.3S
'No one came.'

This sentence involves the NPI *ħada* in preverbal position. This sentence is ungrammatical in spite of the fact that the NPI *ħada* is in the immediate logical scope of negation.

Third, the notion of negative implicature in this account is loose enough to allow for many exceptions. For instance, we can find examples of licit NPIs in contexts that do not give rise to a negative implicature. For example, it is not clear how a habitual sentence like (51) or a future sentence like (52) below would give rise to an implicature with a negative force.

(51) Maryam dāyman btigra **walaw** qiṣṣah gabil ma tnām.
Mary usually read.3SF even story before COMP. sleep.3SF
'Mary usually reads at least one story before she sleeps.'

(52) Maryam raħ ṯhill **walaw** suʔāl.
Mary will answer.3SF even question
'Mary will answer at least one question.'

In sum, the Negative Impicature Analysis of NPI licensing proposes that NPIs need to be the immediate logical scope of negation. It also proposes that the licensing negation need not be overt, but also can be implied by the context of appearance. Like the Surface Structure Accounts and the Downward Entailment Analysis presented in the previous subsections, the Negative Implicature Analysis confuses NPIs with NCIs and focuses mainly on the distribution of NSIs in English. Data from JA has shown that the Negative Implicature Analysis is flawed. On one hand, NPIs in JA have been shown to be grammatical in contexts that do not give rise to a negative implicature such as habituals and future sentences. On the other hand, NPIs in JA have been shown to be ungrammatical even though they are in the immediate scope of negation. The following subsection presents a binding analysis of NPI licensing that is mainly a parallelism of that proposed for anaphors.

4.1.4 The Binding Approach

Progovac (1988, 1993, 1994) proposes a syntactic approach to NPI licensing that is mainly a parallelism of that proposed for anaphors. Her analysis is mainly proposed based on the distribution of the NPIs *any* and *until* in English and the distribution of Serbian/Croatian NPIs. She notices that NPIs like *any* in English are acceptable with clause-mate negation, superordinate negation, and typical negative-like NPI licensing contexts (53); whereas 'strict' NPIs like *until* are acceptable only with clause-mate negation (54):

(53) a. John did not hurt **anyone**.

b. Mary does not say that John hurt **anyone**.

c. Did John hurt **anyone**?

d. If John hurt **anyone**, he must apologize.

e. I doubt that John hurt **anyone**.

(English: Progovac 1994: 81-82)

(54) a. John did not arrive **until** seven o'clock.

b. *I am not saying that John arrived **until** seven o'clock.

c. *Did John arrive **until** seven o'clock?

d. *If John arrived **until** seven o'clock, he was in time.

e. *Peter denied that John arrived **until** seven o'clock.

(English: Progovac 1994: 81-82)

Serbian/Croatian, on the other hand, exhibits two paradigms of NPIs: NI-NPIs (those which begin with the prefix *ni*-) and I-NPIs (those which begin with the prefix *i*-). These two paradigms of NPIs are in complementary distribution. NI-NPIs are acceptable with clause-mate negation; whereas I-NPIs are not (55). I-NPIs are acceptable with superordinate negation and typical negative-like NPI licensing contexts; whereas NI-NPIs are not (56).

(55) a. Milan *(ne) vidi **nishta**.
Milan not sees nothing
'Milan cannot see anything.'

b.*Marija ne poznaje **i(t)ko**-ga.
Mary not knows anyone-ACC

(Serbian/Croatian: Progovac 1994: 40, 42)

(56) a. Marija ne tvrdi da Milan voli **i(t)koga/*ni(t)ko-ga**.
Mary not claims that Milan loves anyone-ACC/no-one-ACC
'Milan does not claim that Mary loves anyone.'

b. Da li Milan voli **i(t)ko-ga/*ni(t)ko-ga**?
that Q Milan loves anyone-ACC/no-one-ACC
'Does Milan love anyone.'

c. Ako Milan povredi **i(t)ko-ga/*ni(t)ko-ga**, bi-c_3e kaz_3njen.
if Milan hurts anyone-ACC/no-one-ACC be-FUT punished
'If Milan hurts anyone, he will be punished.'

d. Sumnja-m da Milan voli **i(t)ko-ga/*ni(t)ko-ga**.
Doubt-1S that Milan loves anyone-ACC/no-one-ACC
'I doubt that Milan loves anyone.'

e. Svako (t)ko povredi **i(t)ko-ga/*ni(t)ko-ga**, mora biti kaz_3njen.
everyone who injures anyone-ACC/no-one-ACC must be punished
'Everyone who injures anyone must be punished.'

(Serbian/Croatian: Progovac 1994: 64-65)

Along the lines of 'Generalized Binding' (Aoun 1985, 1986), Progovac assumes that NPIs are anaphoric and hence are subject to binding principles. She proposes a syntactic principle, two parameters, and a semantic filter to capture the distribution of NPIs:

(57) Universal: All NPIs must be bound and are subject to Binding Principles.

(58) Parameter1: Some NPIs are subject to Principle A; whereas others are subject to Principle B.

(59) Parameter 2: Some NPIs raise at LF; whereas others do not.

(60) *Polarity operator in an upward-entailing (UE) clause.

Potential binders for NPIs are either an overt negative marker or an empty operator (Op) generated in Comp in negative-like contexts. The governing category of NPIs is the first maximal projection which contains the NPI and its first potential antecedent. Thus, the governing category of NPIs in negative contexts (both clause-mate negation and superordinate negation) is

the IP which includes the NPI and its antecedent NegP; whereas the governing category of NPIs in negative-like contexts is the CP which includes the NPI and its antecedent Op. The UE filter is invoked to rule out the presence of Op in upward entailing contexts and rule in other contexts that are not upward monotone.

Progovac assumes that both *any* and *until* are anaphoric and hence they are subject to Principle A of the Binding Theory. She also assumes that *any* has quantificational force and hence can raise at LF; whereas *until* lacks quantificational force and hence cannot raise at LF. Thus, *any* is acceptable with clause-mate negation because it is bound by negation in its governing category. It is also acceptable with superordinate negation and negative-like contexts although it falls outside the domain of its governing category at surface structure in these contexts because it has quantificational force that enables it to raise at LF to a position inside the domain of its governing category. *Until*, on the other hand, is acceptable with clause-mate negation because it is bound by negation inside the domain of its governing category, and it is unacceptable with superordinate negation and typical negative-like NPI licensing contexts because it falls outside the domain of its governing category at surface structure in these contexts, and because it lacks quantificational force that enables it to raise at LF and be placed in a position inside the domain of its governing category.

Progovac assumes that LF raising of NPIs like *any* takes place through movement to Spec of CP with superordinate negation and through IP-adjunction in negative-like contexts as shown in the following examples:

(61) Mary did not claim $[_{CP}$ anyone$_i$ $[_{C'}$ that $[_{IP}$ John hurt $t_i]]]$

(62) $[_{CP}$ Op has $[_{IP}$ anyone $[_{IP}$ John hurt $t_i]]]$

(English: Progovac 1994: 82-83)

Progovac offers independent motivation for the LF raising of the NPI *any*. She shows that the NPI *any* obeys typical movement constraints such as the Empty Category Principle (ECP), Island Conditions, and the Specificity Condition. For example, the NPI *any* is not acceptable with the Coordinate Structure Island, the Adjunct Island, and the Complex NP Island as shown in (63), (64), and (65) respectively below:

(63) ?*I am not asking you to prepare this and bring anyone.

(64) *I did not make a pie after I received anyone.

(65) ?*We were not aware of the fact that anyone had left

(English: Progovac 1994: 82-83)

Progovac also offers independent evidence for the existence of the empty operator Op in negative-like contexts that license NPIs. This evidence is based on inversion, epistemic modals, and selection as shown in the following examples:

(66) a. [$_{CP}$ Who did [$_{IP}$Mary see t]]?

b. [$_{CP}$ Op did [$_{IP}$ Mary see anyone]]?

c. [$_{CP}$ Op Had [$_{IP}$ Mary seen anyone, she would have told me]].

(English: Progovac 1993: 159)

(67) a.?*Must John know the answer?

b. *If John must know the answer, let's ask him.

c. *I doubt that John must know the answer.

(English: Progovac 1994: 78)

(68) a. I forgot [$_{CP}$ Op that anyone dropped by].

b.*I forgot anything.

(English: Progovac 1993: 160)

The examples in (66) show that subject-auxiliary inversion takes place in information questions (66a), yes/no questions (66b), and if-less conditionals (66c). In support of Travis (1984), Progovac argues that inversion takes place in all of these contexts to support the filled Spec of CP. While the Spec of CP is filled by the wh-word in information questions, it is filled by Op in yes/no questions and if-less conditionals. The examples in (67) show that epistemic modals are incompatible with negative-like NPI licensing contexts such as yes/no questions (67a), conditionals (67b), and adversative predicates (67c). In support of McDowell (1987), Progovac argues that this incompatibility is the result of epistemic modals raising to Comp at LF in order to take wide scope over the whole proposition. If yes/no questions, conditionals, and adversative predicates already have an Op in Comp, it then follows that epistemic modals cannot raise to Comp at LF as their landing site is already occupied by Op. The examples in (68) show that NPIs are compatible with adversative predicates that select a sentential complement that hosts a Comp position (68a); whereas they are incompatible with non-sentential complements that do not host a Comp position (68b).

As for NPIs in Serbian/Croatian, Progovac assumes that NI-NPIs are A-bar anaphors and hence they are subject to Principle A of the Binding Theory. Moreover, she assumes that NI-NPIs lack quantificational force and hence they cannot move at LF. Thus, NI-NPIs are acceptable only with clause-mate negation because they can be bound in their governing category only in these contexts thus fulfilling Principle A. I-NPIs, on the other hand, are assumed to be A-bar anaphoric pronominals and hence they are subject to both Principle A and Principle B of the Binding Theory. Moreover, I-NPIs are assumed to have quantificational force and hence they can move at LF. Thus, I-NPIs are not acceptable with clause-mate negation because they are bound by their antecedent inside their governing category thus violating Principle B, and they are

acceptable with superordinate negation and typical negative-like NPI licensing contexts because they fall outside the domain of their governing category in these contexts thus fulfilling Principle B. I-NPIs are assumed to meet Principle A at LF where they are assumed to move to a position inside their governing category.

Progovac notices that not all NPIs display the same distributional patterns as English and Serbian/Croatian NPIs, therefore they cannot be accounted for by the Binding Analysis as it stands so far. There are NPIs that are licensed by clause-mate negation and typical negative-like NPI licensing contexts, but not by superordinate negation. These include NPIs like *renhe* 'any' in Chinese:

(69) a. Ta bu xihuan **renhe** dongxi.
he not like any thing
'He does not like anything.

b. Ta xihuan **renhe** dongxi ma?
you like any thing Q
'Do you like anything?'

c. Ruguo ta xihuan **renhe** dongxi qing gaosu wo.
if he like any thing then tell me.
'If he likes anything, tell me.'

d. Ta jujue gen **renhe** ren shuo-hua.
He refuse with any one talk-language
'He refused to talk to anyone.'

e.*Wo meiyou gaosuguo ta ni zuo **renhe** shiqing.
I did-not tell ASP he you do any matter
'I did not tell him that you did anything.'

(Chinese: Progovac 1994: 87)

There are also NPIs that are acceptable with clause-mate negation and superordinate negation, but they are unacceptable with typical negative-like NPI licensing contexts such as the NPI *hiç* 'any' in Turkish as shown in the following examples:

(70) a. Ali **hiç** kimse-yi gör-me-di.
Ali any person-ACC see-not-PAST
'Ali did not see anyone.'

b. Ali **hiç**-bir şey-in bozul-duğ-u-nu söyle-me-di.
Ali any-a thing- GEN breakdown- GERUND-3SG-ACC say-not-PAST
'Ali did not say that anything broke down.'

c.*(Eğer) Ali **hiç** kimseyi getirirse, televizyon seyred-eceg-iz.
If Ali any person brings TV watch-FUT-we
'If Ali brings anyone over, we will watch TV.'

d.*Zafer Ali'nin **hiç** kimse-yle evlen-me-si-ne şaşırdı.
Zafer Ali any person-with marry-GERUND-3SG-DAT surprise
'Zafir was surprised that Ali married anyone.'

e.*Dibilim hakkinda **hiç**-bir şey okumuş herkes gel-ecek.
linguistics about any-a thing read everyone come-FUT
'Everyone who read anything about linguistics will come.'
(Turkish: Progovac 1994: 89)

Progovac argues that this variation in the distribution of NPIs across different languages can be accounted for by parameterizing the landing site of NPIs that can raise at LF:

> 'Some NPIs raise either by IP-adjunction or by movement through Comp, e.g., English NPIs. Some NPIs can move only by IP-adjunction, e.g., certain NPIs in Romance and Chinese. Finally, some NPIs can only move through Comp, e.g., Turkish NPIs.'
> (Progovac 1994: 79)

In short, the Binding Analysis predicts five types of NPIs in human language. I summarize these types of NPIs in the following table:

Table 1: Five types of NPIs: a binding analysis

NPI type	Binding options		Raising options				Context of appearance			Examples
	Principle A	Principle B	No raising	IP-adjunction or movement through Comp	IP-adjunction only	Movement through Comp only	Clause-mate negation	Superordinate negation	Negative-like contexts	
1	√	√	------	√	------	------	------	√	√	Serbian/ Croatian I-NPIs
2	√	------	------	√	------	------	√	√	√	English *any*
3	√	------	√	------	------	------	√	------	------	English *until*, Serbian/ Croatian NI-NPIs
4	√	------	------	------	√	------	√	------	√	Chinese *renhe*
5	√	------	------	------	------	√	√	√	------	Turkish *hiç*

This table predicts five types of NPIs in human languages. First, there are NPIs that are subject to both Principle A and Principle B of the Binding Theory and that can move either by IP-adjunction or through Comp at LF. These NPIs are predicated to be acceptable with superordinate negation and typical negative-like NPI licensing contexts but not with clause-mate negation such as I-NPIs in Serbian/Croatian. Second, there are NPIs that are subject to Principle A of the Binding Theory and that can move either by IP-adjunction or through Comp at LF. These NPIs are predicated to be acceptable with clause-mate negation, superordinate negation, and typical negative-like NPI licensing contexts such as the NPI *any* in English. Third, there are NPIs that are subject to Principle A of the Binding Theory and that cannot raise at LF. These NPIs are predicted to be acceptable with clause-mate negation but never with superordinate negation and typical negative-like NPI licensing contexts such as the NPI *until* in English and NI-NPIs in Serbian/Croatian. Fourth, there are NPIs that are subject to Principle A of the Binding Theory and that can raise only by IP-adjunction at LF. These NPIs are predicated to be acceptable with clause-mate negation and typical negative-like NPI licensing contexts, but not with superordinate negation such as the NPI *renhe* in Chinese. Finally, there are NPIs that are subject to Principle A of the Binding Theory and that can raise only by movement through Comp at LF. These NPIs are predicted to be acceptable with clause-mate negation and superordinate negation, but not with typical negative-like NPI licensing contexts such as the NPI *hiç* in Turkish.

The Binding Approach to NPI licensing is the first approach among those presented so far that attempts an analysis of the distributional differences among NSIs. However, this approach equates NCIs with NPIs. This approach considers all NSIs in Serbian/Croatian (i.e.

both NI-NPIs and I-NPIs) as NPIs in spite of the fact that NI-NPIs display the properties known of NCIs such as the ability to provide negative fragment answers:

(71) A: Kto przysedł?
who came
'Who came?'

B: **Nikt**.
n-person
'Nobody.'

(Polish: Penka 2011: 2)

The Binding Analysis approaches the distributional differences between NPIs and NCIs by hypothesizing that NCIs are a special kind of NPIs that are subject to binding principles and raising parameters that are different from those proposed for 'genuine' NPIs. For example, while I-NPIs in Serbian/Croatian are subject to Principle A and Principle B of the Binding Theory and they can raise either via adjunction or through Comp, NI-NPIs are subject only to Principle A of the Binding Theory and they cannot raise at all.

We have seen that JA exhibits both types of NSIs: NPIs and NCIs. NPIs have been shown to be grammatical with clause-mate negation, superordinate negation, and a number of negative-like contexts; whereas NCIs have been shown to be grammatical with clause-mate negation and a subset of the negative-like contexts that license NPIs, namely *before*-clauses and *without*-clauses, but not with superordinate negation. At first approximation, the Binding Approach predicts that NPIs in JA are subject to Principle A of the Binding Theory and that they can raise either via adjunction or through Comp. It also predicts that NCIs are subject to Principle A of the Binding Theory and that they cannot raise at all. I will focus here on the inadequacy of the Binding Approach for accounting for the licensing of the set of NSIs that function as NPIs in JA.

Problems with the Binding Approach to NCIs in JA will be saved for the next chapter where different theories of NCI licensing are presented and discussed.

JA raises two major problems with the Binding Analysis of NPI licensing. First, NPIs in JA seem to require no binding principle on their licensing. In addition to clause-mate negation, NPIs in JA are also grammatical with superordinate negation. All NPIs in JA can occur with superordinate negation as shown in the following examples:

(72) Maryam *(ma)-gālat ʔənn-ha ʃāfat **ħada** fi-d-dār.
Mary NEG-said.3SF that-her saw.3SF one in-the-house
'Mary did not say that she saw someone in the house.'

(73) Maryam *(ma)-gālat ʔənn -ha akalat **iʃi**.
Mary NEG-said.3SF that-her ate.3SF thing
'Mary did not say that she ate something.'

(74) Salwa *(ma)-gālat ʔənn-ha ħakat **walaw** kilmih.
Salwa NEG-said.3SF that-her said.3SF even word
'Salwa did not say that she said any word.'

(75) Layla *(ma)-gālat ʔənn-ha ʃtarat **ʔayy** ktāb.
Layla NEG-said.3SF that-her bought.3SF which book
'Layla did not say that she bought any book.'

(76) Maryam *(ma)-gālat ʔənn-ha **ʕumur**-ha zārat ʔamrīka
Mary NEG-said.3SF that-her ever-her visited.3SF America
'Mary did not say that she has ever visited America.'

(77) Salma *(ma)-gālat ʔənn-ha ṣarafat **fil aħmar**.
Salma NEG-said.3SF that-her spent.3SF red cent
'Salma did not say that she spent a red cent.'

NPIs in JA are also grammatical inside islands. I illustrated this for indefinite-*ʔayy*-DPs in the language:

(78) Maryam *(ma)-ṭalaʕat laʔənn-ha kānat xāyfih min **ʔayy** wāḥad.
Mary NEG-left.3SF because-her was.3SF afraid of which one.
'Mary did not leave because she was afraid of anyone.'

(79) Maryam *(ma)-rassabat ṭ-ṭulāb ʔəlli ḥallu **ʔayy** suʔāl.
Mary NEG-failed.3SF the-students who answered.3P which question
'Mary did not fail the students who answered any question.'

(80) ʔana *(ma)-samәʕit iʃ̃āʕit ʔənn -hum ḥabasu **ʔayy** wāḥad.
I NEG-heard.1S rumer that-them arrested.3PM which one
'I did not hear the rumor that they arrested anyone.'

These examples show that indefinite-*ʔayy*-DPs are acceptable inside the Adjunct Island Constraint (78), the Relative Clause Constraint (79), and the Complex NP Constraint (80). This clearly shows that NPIs in JA are licensed in situ and that they do not raise at LF. That NPIs are licensed in situ, and that they are grammatical with both clause-mate negation and superordinate negation makes it clear that they are not subject to any binding principle. If NPIs in JA were subject to Principle A, they would need to raise to a position inside their governing category when they co-occur with superordinate negation. If NPIs in JA were subject to Principle B, they would not be acceptable with clause-mate negation.

Second, the Binding Analysis fails to capture all of the negative-like contexts that can license NPIs in JA. Progovac argues that NPIs in negative-like contexts are licensed by virtue of being bound by an abstract operator in Comp. This operator is supposed to be present only in contexts that are not upward entailing. However, data from JA show that NPIs are licit in contexts that are clearly upward entailing. Such contexts include habituals and future sentences as shown in the following example:

(81) Maryam dāyman btigra **walaw** qiṣah gabil ma tnām.
Mary usually read.3SF even story before COMP. sleep.3SF
'Mary usually reads at least one story before she sleeps.'

(82) Maryam raħ ṯhill **walaw** suʔāl.
Mary will answer.3SF even question
'Mary will answer at least one question.'

These examples show that the scalar focus particle *walaw* 'even , at least' is acceptable with habituals (81) and future sentences (82). The Binding Analysis predicts these contexts to be either non-monotone or downward entailing but not upward entailing. This prediction is not borne out. Habituals and future sentences are, in fact, upward entailing as illustrated in the following examples:

(83) a. Jack usually reads **a short story** before he sleeps. ⟶

b. Jack usually reads **a story** before he sleeps.

(84) a. Alex will buy **a Mercedes**. ⟶

b. Alex will buy **a car**.

The habitual sentence (83a) upward-entails sentence (83b) as it allows for the substitution of subsets (short story) by supersets (story). The future sentence (84a) upward-entails sentence (84b) as it allows for the substitution of subsets (Mercedes) by supersets (car).

In sum, the Binding Analysis of NPI licensing presented in this subsection proposes that NPIs are subject to the same binding principles that constrain the distribution of anaphors. Potential binders for NPIs involve either overt negation or an abstract operator generated in Comp in non-upward entailing contexts. This analysis approaches the different distributional patterns of NSIs (i.e. NPIs and NCIs) by arguing that these distributional differences reflect the fact that NPIs and NCIs are subject to different binding principles and raising parameters. The Binding Analysis does not extend to JA. NPIs in JA have been shown to be grammatical in

contexts that are upward entailing such as habituals and future sentences. NPIs in JA have also been shown to require no binding principles on their licensing. The following subsection discusses one last approach to NPI licensing. This approach assumes that the distribution of NPIs can be captured by the semantic notion of (non-)veridicality.

4.1.5 The (Non)veridicality Approach

Building on Zwarts (1995), Giannakidou (1998, 1999, 2000, 2002, 2006, 2011) proposes a semantic approach to NPI licensing based on (non-)veridicality. Her analysis is mainly proposed for Greek NPIs but is meant to provide a cross-linguistic analysis of NPI licensing. Giannakidou distinguishes two paradigms of NPIs in Greek: emphatics (those that are accented) and non-emphatics (those that are not accented). These are reproduced under (85) below:

(85) Two paradigms of NPIs in Greek

Emphatics		**Non-emphatics**	
KANENAS	'no one, no body'	kanenas	'anyone, anybody'
KANENAS N	'no N-singular'	kanenas N	'any N-singular'
----------	----------	tipota N_{plural}	'any N-plural, no N-plural'
TIPOTA	'nothing'	tipota	'anything'
POTE	'never'	pote	'ever'
PUTHENA	'nowhere'	puthena	'anywhere'
KATHOLU	'not at all'	katholu	'at all'

The (Non-)veridicality approach to NPI licensing has a semantic part, a pragmatic part, and a syntactic part. The semantic part is invoked to account for the basic distributional patterns of NPIs in Greek. Both emphatics and non-emphatics are licit in contexts that involve an overt negative marker and negative-like operators such as *without*-clauses and *before*-clauses as shown in the following examples:

(86) O papus dhen idhe **KANENA/kananan** apo ta egonia tu.
the grandpa not saw.3SG any from the grandchildren his
'Grandpa did not see any of his grandchildren.'

(87) O papus pethane xoris na dhi **KANENA/kanena** apo ta
the grandpa died.3sg without SUBJ see.3sg any from the
egonia tu.
grandchildren his
'Grandpa died without seeing any of his grandchildren.'

(88) O papus pethane prin na dhi **KANENA/kanena** apo ta
the grandpa died.3sg before SUBJ see.3sg any from the
egonia tu.
grandchildren his
'Grandpa died before seeing any of his grandchildren.'

(Greek: Giannakidou 1998: 57)

However, only non-emphatics are licit in other contexts that do not involve negation. These contexts include questions, antecedents of conditionals, restriction of universal quantifiers, future sentences, epistemic and deontic modal verbs, subjunctive clauses, imperatives, habitual sentences, disjunctions, negative verbs, and *perhaps*-clauses as shown in the following examples:

(89) Pijes **pote/ *POTE** stoparisi?
went.2G ever in-theParis
'Have you ever been to Paris?'

(90) An dhis tin Ilektra **puthena/*PUTHENA**, na tis milisis.
if see.2SG the Electra anywhere SUBJ her talk.2SG
'If you see Electra anywhere, talk to her.'

(91) Oli osi gnorizun **tipota/*TIPOTA** ja tin ipothesi, as milisun.
all who know.3PL anything for the issue, SUBJ talk.3PL
'Everyone who knows anything about the issue let them speak.'

(92) Tha vro **kanena/*KANENA** filo na me voithisi.
FUT.find.1SG any friend SUBJ me help.3SG
'I will find a friend to help me.'

(93) Prepi na episkeftis **kananen/ *KANENAN** jatro.
must.3SG SUBJ visit any doctor
'You should visit a doctor.'

(94) Elpizo na emine **kanena/*KANENA** komati.
hope.1SG SUBJ left.3SG any piece
'I hope there is a piece left.'

(95) Pijene se **kanenan/*KANENAN** jatro.
go.IMP.2SG to any doctor
'Go to a doctor!'

(96) Otan pijena ja ipno, ksefiliza sinithos **kanena/*KANENA** periodhiko.
when went.1SG for sleep, browsed.1SG usually any magazine
'Whenever I went to bed, I usually browsed through a magazine.'

(97) I bike **kanenas/*KANENAS** mesa i afisame to fos anameno.
or entered.3SG anyone in or left.1PL the light hit
'Either somebody broke into the house or we left the light on.'

(98) Arnithike oti idhe **tipota/*TIPOTA**.
denied.3SG that saw.3SG anything
'He denied that he saw anything.'

(99) Isos na irthe **kanenas/*KANENAS**.
perhaps SUBJ came.3SG anybody
'Perhaps somebody came.'

(Greek: Giannakidou 1998: 58-60)

Giannakidou argues that the distribution of NPIs in Greek depends on the (non-)veridicality of the context of appearance: only non-veridical environments license NPIs. She proposes a truth-based definition of veridicality as follows:

> 'Veridicality is a property of sentence embedding functions: such a function *F* is veridical if *Fp* entails or presupposes the truth of *p*. If inference of the truth of *p* under *F* is not possible, *F* is nonveridical. More specifically, veridical operators express certainty and an individual's commitment to the truth of proposition but nonveridical expressions express uncertainty and lack of commitment. Within the class of the nonveridical expressions, negation is identified as ANTI-VERIDICAL in that *NOT p* entails that *p* is false.'
>
> (Giannakidou 2011: 22)

Thus, Giannakidou distinguishes three types of operators in terms of veridicality: veridical, non-veridical, and anti-veridical operators of which only non-veridical and

anti-veridical operators license NPIs. These assumptions are illustrated with the following examples from English:

(100) a. Paul saw a snake. ⟶
b. It is the case that Paul saw a snake.
c.*Paul saw **any snakes**.

(101) a. Paul did not see a snake. ⟶
b. It is not the case that Paul saw a snake.
c. Paul did not see **any snakes**.

(102) a. Did Paul see a snake? ⟶
b. It might be the case that Paul saw a snake.
c. Did Paul see **any snakes**?

Sentence (100a) is veridical as evident from the inference in (100b) and thus does not license NPIs as shown in (100c). Sentence (101a) is anti-veridical as evident from the inference in (101b) and thus licenses NPIs as shown in (101c). Sentence (102a) is non-veridical as evident from the inference in (102b) and thus licenses NPIs as shown in (102c).

The pragmatic part of the (non-)veridicality approach to NPI licensing is invoked to account for cases of NPIs with no overt non-veridical or anti-veridical operators. The pragmatic part accounts for licensing environments such as rhetorical questions, counterfactual conditionals, too-clauses, as if-clauses, comparatives, superlatives, and downward entailing DPs as shown in the following examples:

(103) Pote ekanes esi **tipota/*TIPOTA** ja na me voithisis?
when did.2SG you anything for SUBJ me help.2SG
'When did you ever do anything to help me?'

(104) An iksere **tipota/*TIPOTA** tha mas to ixe pi.
if knew.3SG anything FUT.us it had.3SG said
'If he knew anything he would have told us.'

(105) I Ilektra ine POLI kurasmeni ja na milisi se **kanenan/*KANENAN**.
the Electra be.3SG too tired for SUBJ talk.3SG to anyone
'Electra is too tired to talk to anybody.'

(106) Kanis sa na ise **kanena/*KANENA** moro.
do.2SG as SUBJ be.2SG any baby
'You behave as if you were a baby.'

(107) Apodhixtike pjo eksipni apoti perimene **kanenas/*KANENAS**.
proved.3SG more intelligent than expected.3SG anybody
'She turned out to be more intelligent than anyone had expected.'

(108) Ine to kalitero vivliopu exo dhiavasi **pote/*POTE** os fititria.
be.3SG the better book that have.1SG read ever as student
'This is the best book I have ever read as a student.'

(109) LIJI fitites idhan **tipota/*TIPOTA**.
few students saw.3PL anything.
'Few students saw anything

(Greek: Giannakidou 1998: 58-60, 145-146)

Giannakidou argues that these contexts license non-emphatic NPIs in spite of the fact that they lack non-veridical operators by virtue of giving inferences to a negative implicature. The negative implicature that arises in such contexts is illustrated with examples from English below:

(110) a. If he had arrived, we would have known.
b. NEGATIVE IMPLICATURE: He had not arrived.

(111) a. Who gives a damn about what you think?
b. NEGATIVE IMPLICATURE: Nobody gives a damn about what you think.

(112) a. Mary is too tired to go anywhere.
b. NEGATIVE IMPLICATURE: Mary cannot go anywhere.

(113) a. You behave as if you are a baby.
b. NEGATIVE IMPLICATURE: You are not a baby.

(114) a. Jack ran faster than anyone had expected.
b. NEGATIVE IMPLICATURE: i. Jack ran *g* fast.
ii. *k* is the greatest degree that people expected Jack to run *k* fast.
iii. ¬ [people expected Roxanne to run *g* fast]

(115) a. She is the most handsome woman I have ever seen.
b. NEGATIVE IMPLICATURE: i. she is *g* handsome.
ii. The women I have seen before were at most *k* handsome.
iii. ¬ [I have seen a woman *g* handsome in my life]

(116) a. Few students said anything.
b. NEGATIVE IMPLICATURE: It is not the case that many students said something.

Supporting evidence for the assumption that non-veridicality is not a logical property of some operator present in these contexts but rather is the result of a pragmatic effect that the utterance gives rise to comes from examples like the following:

(117) a. Paul did not arrive.

b.*Paul did not arrive and he in fact arrived.

(118) a. Who cares about what will happen to me?

b. Who cares about what will happen to me (and I am sure somebody does)?

c.*Who gives a damn about what will happen to me (and I am sure somebody does)?

Non-veridicality that is associated with overt negation in (117a) is a semantic property of the utterance as evident from the contradiction that arises in (117b). In contrast, non-veridicality that is associated with the rhetorical question in (118a) is a pragmatic property of this utterance as evident from the absence of contradiction in (118b) and the ungrammaticality of NPIs in (118c). It is claimed that the ungrammaticality of NPIs in utterances like (118c) is due to the unavailability of negative implicature.

Giannakidou refers to licensing by negative implicature as 'indirect licensing' or 'rescuing'. She further argues that indirect licensing is a secondary condition on NPI licensing: NPIs that are licensed only indirectly are not attested in human languages. As to why only

non-emphatic NPIs, but not emphatic NPIs are licensed in the sentences in (104-110), she argues that this is because non-emphatic NPIs can be licensed indirectly in Greek; whereas emphatic NPIs cannot.

The syntactic part of the (non-)veridicality approach to NPI licensing is invoked to account for semantic and syntactic differences between emphatic and non-emphatic NPIs in Greek. First, emphatic NPIs can be modified by adverbs like *almost*; whereas non-emphatic NPIs cannot (119). Second, emphatic NPIs are sensitive to islands; whereas non-emphatic NPIs are not (120). Third, emphatic NPIs cannot be licensed long distance; whereas non-emphatic NPIs can (121).

(119) Dhen idha sxedhon **KANENAN/*kanenan**.
not saw.1SG almost anybody
'I saw almost nobody.

(120) Dhen itan isixi [epidhi fovithike **kanenan/*KANENAN**].
not was.3SG quiet because was-scared-3SG anyone
'S/he wasn't quiet because (s)he was scared of anybody.'

(121) I Ilectra dhen ipe oti idhe **tipota/*TIPOTA**.
the Electra not said.3SG that saw.3G anything
'Electra did not say that she saw anything.'

(Greek: Giannakidou 1998: 62-64)

Giannakidou argues that these differences follow from the status of emphatic NPIs as universal quantifiers and the status of non-emphatic NPIs as existential quantifiers. First, emphatic NPIs but not non-emphatic NPIs are compatible with adverbs like *almost* because only universal quantifiers can be modified by adverbs like *almost* (cf. Dahl 1970; Horn 1972). Second, emphatic NPIs are not licit inside islands because they, as universal quantifiers, involve a movement dependency; whereas non-emphatics are licit inside islands because they, as existential quantifiers, do not involve a movement dependency. Third, emphatic NPIs are illicit

with superordinate negation because the scope of universal quantifiers is known to be clause-bound; whereas non-emphatics are licit with superordinate negation because the scope of existential quantifiers is not clause-bound (cf. Reinhart 1976).

Beside these differences, Giannakidou noticed that emphatic NPIs but not non-emphatic NPIs can provide negative fragment answers and thus they display the properties of NCIs:

(122) A: Ti idhes?
what saw.2SG
'What did you see?'

B: **TIPOTA**.
n-thing
'Nothing.'

B': ***tipota***.
n-thing
'Anything.' (Greek: Giannakidou 2000: 459)

However, Giannakidou argues that NC does not exist as a real phenomenon. Rather, she argues that NCIs are not inherently negative and thus sentences including a sentential negative marker and a NCI include only one negative expression, namely the sentential negative marker. She also assumes that the sentential negative marker is also responsible for the expression of negation in a fragment answer like (122B) above. The sentential negative marker in a sentence like (122B) above is assumed to have undergone ellipsis. Giannakidou adopts Merchant's (2004) movement-based analysis of fragments which claims that a fragment moves to the left-peripheral position of the clause (namely, Spec, FP) followed by PF deletion of the constituent out of which it has moved. This analysis explains why only emphatic NPIs but not non-emphatic NPIs can express fragment answers in Greek. Only emphatics can be topicalized and thus appear in a left-peripheral position in the language:

(123) **KANENAN/*kanenan** dhen idha.
any not saw.1SG
'I saw nobody.'

(Greek: Giannakidou 1998: 160-161)

Emphatics but not non-emphatics can provide fragment answers because fragments are assumed to move to a peripheral position, a property which only emphatic NPIs exhibit in Greek.

Consequently, emphatic NPIs involve a movement dependency and thus they need not be in the scope of their licenser either in the semantics or in the syntax. Giannakidou states the licensing condition on emphatic NPIs in Greek as follows:

(124) Licensing condition for emphatic NPIs:

An emphatic NPI α will be licensed in a sentence S iff S is antiveridical.

Notice here that this condition has neither a semantic nor a syntactic scope clause. This analysis strongly diverges from previous analysis of NPI licensing where NPIs always required a scope condition on their licensing.

Non-emphatics, on the other hand, are licensed in situ and thus they seem to require a scope condition on their licensing. Giannakidou shows that non-emphatics need to be in the scope of their licenser, and she further argues that scope here translates into a c-command condition at LF. This result is supported by examples of illicit non-emphatic NPIs in the c-command domain of negation at surface structure, and licit non-emphatic NPIs outside the c-command domain of negation at surface structure as shown below:

(125) a.*Dhen lipame pu pligosa **kanenan**.
not regert.1SG that hurt.1SG anyone
'I do not regret that I hurt anybody.'

b. Fimes oti sinelavan **kanenan** dhen kikloforisan.
rumors that arrested.3PL anybody not were-circulated.3PL
'Rumors that they arrested anybody were not circulated.'
(Greek: Giannakidou 1998: 235-236)

Sentence (125a) is ungrammatical although *kanenan* 'anyone' is c-commanded by negation at surface structure, and sentence (125b) is grammatical although *kanenan* is not c-commanded by negation at surface structure. As for (125a), Giannakidou argues that *kanenan* occurs in a *pu*-complement that is presuppositional rather than assertive. She further argues that the presuppositional nature of *pu*-complements can be captured be assuming that they undergo QR to a position above negation by adjunction to the matrix IP at LF where they cannot reconstruct. As for (125b), *kanenan* is assumed to occur in a topicalized phrase that reconstructs at LF. Consequently, (125a) and (125b) are argued to have the LF structures illustrated in (126a) and (126b) respectively below:

(126) a. $[_{IP}\,[_{CP}$ pu pligosa kanenan$]_1\,[_{IP}$ dhen lipame $[_{VP}\,[_{CP}\,t_1]]]]$

b. $[_{IP}\,[_{NP}$ ~~fimes oti sinelavan kanenan~~$]_1\,[_{IP}$ dhen kikloforisan $[_{VP}\,[_{NP}$ **fimes oti sinelavan kanenan**$]_1\,]]]$
(Greek: Giannakidou 1998: 235-236)

Taking these facts into consideration, Giannakidou states the licensing condition on non-emphatic NPIs in Greek as follows:

(127) Syntactic licensing of non-emphatic NPIs:

A non-emphatic NPI α will be grammatical only if it is c-commanded by a non-veridical operator β at LF.

The (Non-)veridicality Approach is another approach that acknowledges the fact that NSIs do not exhibit the same distributional patterns but rather have some peculiarities that need

to be accounted for in any adequate theory of NSIs licensing. Giannakidou identified two paradigms of NSIs in Greek: emphatics and non-emphatics. She realizes the fact that, of these two sets of items, emphatics exhibit the properties known of NCIs. The status of emphatic NSIs in Greek as NCIs is supported by their ability to provide negative fragment answers as shown in (122) above, repeated as (128) below:

(128) A: Ti idhes?
what saw.2SG
'What did you see?'

B: **TIPOTA**.
n-thing
'Nothing.'

(Greek: Giannakidou 2000: 459)

Giannakidou proposes that both emphatic and non-emphatic NSIs in Greek are NPIs and she approaches their distributional differences by proposing different mechanisms on their licensing in terms of (non-)veridicality. Non-emphatics are existential quantifiers that need to be in the c-command domain of a non-veridical operator at LF, whereas emphatics are universal quantifiers that only need to appear anywhere in an anti-veridical context.

I will focus here on evaluating the (Non-)veridicality Approach to the licensing of NPIs in JA. I will show that the (Non-)veridicality Approach fairs better than previous approaches in accounting for the distribution of NPIs in JA. The adequacy of the (Non-)veridicality Approach as an analysis of NCIs in JA will be saved for chapter five where it will be compared and contrasted with other theories of NCIs.

Giannakidou proposes two conditions on the licensing of NPIs. First, an NPI needs to appear in a non-veridical context. Second, an NPI needs to be in the c-command domain of its

non-veridical licenser at LF. I will take these two conditions in turn and show that they correctly predict the distribution of NPIs in JA.

The first condition correctly predicts the contexts of appearance for NPIs in JA. We have seen in chapter three that NPIs in JA are grammatical in a number of seemingly unrelated contexts. These contexts include negation, *without*-clauses, *before*-clauses, wh-questions, yes/no questions, the protasis of conditionals, the restriction of universal quantifiers, adversative predicates, habituals, future sentences, epistemic and deontic modal verbs, subjunctives, imperatives, disjunctions, too-clauses, as-if-clauses, and downward entailing operators[6]. We have seen that Giannakidou identified the same licensing contexts for NPIs in Greek and that she successfully identified non-veridicality as the common feature among these contexts: an NPI is licit in a given context only if that context is non-veridical. The (Non-)veridicality Approach correctly predicts the distribution of NPIs in JA: NPIs in JA are grammatical in a given context only if that context is non-veridical. I will not provide an elaborate discussion of the non-

[6] Other contexts that have been identified as NPI licensing include the scope of *only*, compartaives, and superlatives (Giannakidou, 1998). Data from JA show that NPIs are not acceptable in these contexts in the language as shown in the following examples:

(1) * bass Maryam ħallat **walaw** suʔāl.
only Mary answered.3SF even question
'Only Mary answered any question.'

(2) * Maryam asraʕ min ma **walaw** wāħad twaqqaʕ.
Mary faster than COMP. even one expected.3S
'Mary is faster that anyone had expected.'

(3) * Maryam aððka ṭālibih ʃārakat fi **walaw** muʔtamar.
Maryam smartest student.F participated.3SF in even conference
'Mary is the smartest student who participated in any conference.'

The ability of *only*, clausal comparatives, and superlatives to license NPIs is controversial.One important fact about these contexts is that while they do not license NPIs in some languages such as JA, they license NPIs in other languages such as English as shown in the translations of the aforementioned examples. Giannakidou (1998) and Giannakidou and Yoon (2010) argue that the variation of NPI licensing in these contexts does not callange the (Non-)veridicalty Approach. They argue that these contexts are not non-veridical themselves but rather license NPIs indirectly through 'rescuing'. Therefore, they ascribe the variation in the acceptability of different NPIs in these contexts to the fact that while some NPIs can be rescued in these contexts, others cannot.

veridicality properties of each of the NPI licensing contexts discussed here. For such an elaborate discussion, I refer the reader to Giannakidou (1998).

Now we turn to the second condition that Giannakidou proposes on NPI licensing. This second condition states that NPIs must be in the c-command domain of their licenser at LF. Data from JA supports the LF c-command condition on NPI licensing. Supporting evidence for the LF c-command condition on NPI licensing in JA comes from focus-fronted NPIs, clitic-left dislocated NPIs, and NPIs that are restricted to a post-verbal position in simple sentences in the language. I discuss each of these contexts in turn below.

Focus-fronted NPIs surface in a preverbal position as shown in the following examples:

(129) **walaw** kilmih Maryam *(ma)-ħakat.
even word Mary NEG-said.3SF
'Mary did not say any word.'

(130) **fils aħmar** Maryam *(ma)-ṣarafat.
cent red Mary NEG-spent.3SF
'Mary did not spend a red cent.'

Recall from chapter two that focus-fronting constructions in Arabic display reconstruction effects such as Island Constraints and thus they are assumed to be derived by movement rather than base-generation (cf. section 2.1.2). This predicts the preverbal focus-fronted NPIs in examples like (129-130) above to obey Island Constraints. This prediction is borne out as shown in the following examples:

(131) a.***walaw** wāħad Maryam ma-ţalaʕat laʔənn-ha kānat xāyfih min.
even one Mary NEG-left.3SF because-her was.3SF afraid from
'Mary did not leave because she was afraid of anyone.'

b.*__walaw__ suʔāl Maryam ma-rassabat ṭ-ṭulāb ʔəlli ħallu.
even question Mary NEG-failed.3SF the-students who answered.3P
'Mary did not fail the students who answered any question.'

c.*__walaw__ wāħad ʔana ma-samәʕit iʃāʕit ʔənn-hum ħabasu.
even one I NEG-heard.1S rumor that-them arrested.3PM
'I did not hear the rumor that they arrested anyone.'

These examples show that focused-fronted NPIs in JA obey the Adjunct Island Constraint (131a), the Relative Clause Constraint (131b), and the Complex NP Constraint (131c). This strongly suggests that, at LF, preverbal NPIs in JA need to reconstruct to their base-position where they are interpreted in the c-command domain of their licenser.

Let us now turn to clitic-left dislocated NPIs in JA. NPIs in JA can be clitic-left dislocated in which case they surface in a preverbal position leaving a resumptive clitic in their base-position as shown in the following examples:

(132) **walaw** kilmih Maryam *(ma)-ħakat-ha.
even word Mary NEG-said.3SF-it
'Mary did not say any word.'

(133) **fils aħmar** Maryam *(ma)-ṣarafat-uh.
cent red Mary NEG-spent.3SF-it
'Mary did not spend a red cent.'

Recall from Chapter two that clitic-left dislocated constructions in Arabic involve either movement or base-generation depending on whether a clitic-left dislocation construction displays reconstruction effects or not (cf. section 2.1.2). Consider the following contrast from JA.

(134) a. **ṭālib-[ha]$_i$ l-kaslān** [kul mʕalmih]$_i$ ʕāqabat-uh.
student-her the-lazy every teacher.SF punished.3SF-him
'Every teacher punished her lazy student.'

b.*__ṭālib-[ha]$_i$__ **l-kaslān** ṭalaʕto gabil ma [kul mʕalmih]$_i$ tʕāqb-uh.
student-her the-lazy left.2P before COMP. [every teacher.SF] punish.3SF-him
'You left before every teacher punished her lazy student.'

In (134a), the lower subject quantifier phrase *kul mʕalmih* 'every teacher' can bind the pronoun within the clitic-left dislocated NP *ṭālib-ha l-kaslān* 'her lazy student'. In (134b), on the other hand, the lower subject quantifier phrase cannot bind the pronoun within the clitic-left dislocated NP. Assuming that reconstruction is a property of chains generated by movement (Hornstein 1984; Barss 1986; Chomsky 1993), and that bound pronouns must be c-commended by a proper antecedent at LF (Chomsky 1976, Higginbotham 1980; Hornstein and Weinberg 1990), the grammaticality of (134a) as opposed to the ungrammaticality of (134b) follow from the reconstruction of the clitic-left dislocated NP that involves the bound pronoun below the subject quantifier phrase in the former but not in the later. In (134a), nothing blocks reconstruction of the clitic-left dislocated NP with the bound pronoun; whereas in (134b), the clitic-left dislocated NP with the bound pronoun is related to a clitic within an Adjunct Island. Assuming that extraction from islands is not possible (Ross 1967), the clitic-left dislocated NP in (134b) does not reconstruct since reconstruction is a property of chains created by movement. Aoun and Benmamoun (1998) and Aoun et al. (2010) took these facts to conclude that clitic-left dislocation constructions that do not involve islands are derived by movement and are thus interpreted in their base-position at LF; whereas clitic-left dislocated constructions that involve islands are base-generated in their surface position. They argue that the only difference between clitic-left dislocation constructions that do not involve islands and focus-fronting constructions is that the former involve movement that takes place in the PF component of grammar (i.e. post-Spell-Out) and is driven by filters like the Doubly Filled Specifier/Head Filter while the latter involves

movement that takes place in the syntax (i.e. pre-Spell-Out or at LF) and is driven by feature-checking.

This conclusion has an important consequence for the licensing of NPIs in JA. It predicts that NPIs in JA cannot be acceptable in clitic-left dislocation constructions that involve islands if they need to be in the c-command domain of their licenser at LF. Data from JA support this prediction as shown in the following contrast:

(135) a. **z-zalamih** Maryam ma-ṭalaʕat laʔənn-ha kānat xāyfih minn-uh.
the-man Mary NEG-left.3SF because-her was.3SF afraid from-him
'Mary did not leave because she was afraid of the man.'

b. **s-suʔāl l-ʔawwal** Maryam ma-rassabat ṭ-ṭulāb ʔəlli ħallu-uh.
the-question the-first Mary NEG-failed.3SF the-students who answered.3P-it
'Mary did not fail the students who answered the first question.'

c. **Yazan** ʔana ma-samәʕit iʃ̃āʕit ʔənn-hum ħabasu-uh.
Yazan I NEG-heard.1S rumor that-them arrested.3PM-him
'I did not hear the rumor that they arrested Yazan.'

(136) a.***walaw** wāħad Maryam ma-ṭalaʕat laʔənn-ha kānat xāyfih minn-uh.
even one Mary NEG-left.3SF because-her was.3SF afraid from-him
'Mary did not leave because she was afraid of anyone.'

b.***walaw** suʔāl Maryam ma-rassabat ṭ-ṭulāb ʔəlli ħallu-uh.
even question Mary NEG-failed.3SF the-students who answered.3P-it
'Mary did not fail the students who answered any question.'

c.***walaw** wāħad ʔana ma-samәʕit iʃ̃āʕit ʔənn-hum ħabasu-uh.
even one I NEG-heard.1S rumor that-them arrested.3PM-him
'I did not hear the rumor that they arrested anyone.'

The examples under (135) show that a clitic-left dislocated non-NPI can be related to a clitic inside an Adjunct Island (135a), a Relative Clause Island (135b), or a Complex NP Island

(135c). These examples under (136), on the other hand, show that a clitic-left dislocated NPI cannot be related to a clitic inside an Adjunct Island (136a), a Relative Clause Island (136b), or a Complex NP Island (136c). This contrast follows if we assume that NPIs in JA need to reconstruct to their base-generation where they are interpreted in the c-command domain of their licenser at LF.

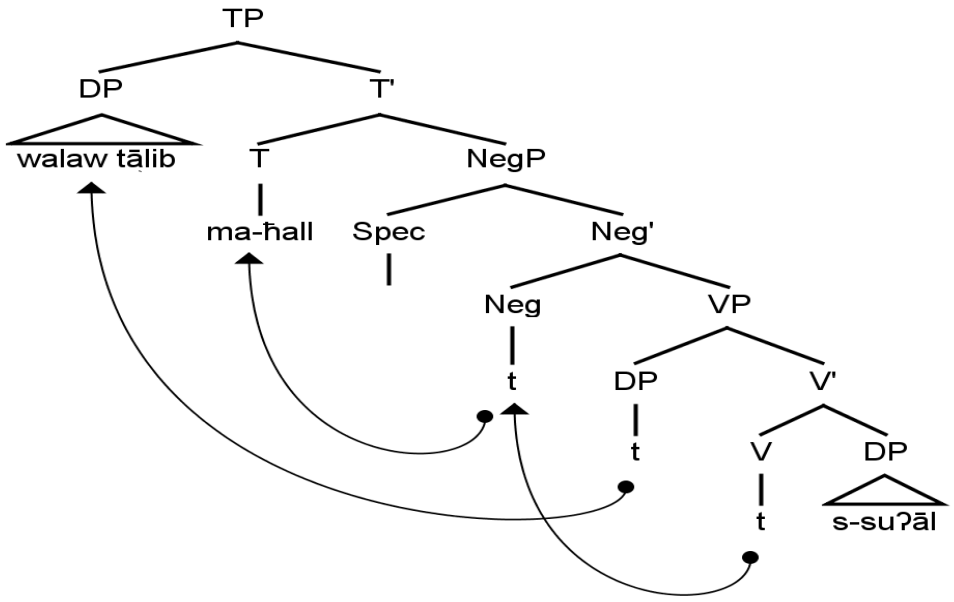
The analysis of NPIs in JA as elements that need to be in the c-command domain of their licenser at LF extends to preverbal subject NPIs in the language. NPIs in JA can occur as preverbal subjects in which case they appear in a position preceding their licenser in the surface syntax:

(137) **walaw** ṭālib *(ma)-ħall s-suʔāl.
even student NEG-answered.3S the-question
'Even (one) student did not answer the question.'

Recall from chapter two that two hypotheses have been proposed on the status of preverbal subjects in Arabic. Under one hypothesis, preverbal subjects are considered as real subjects that originate in Spec, VP and later undergo movement to Spec, TP (The Subject Hypothesis). Under another hypothesis, preverbal subjects are analyzed as clitic-left dislocated elements binding a null resumptive pronominal in the A-domain of the clause (i.e. topics) (The Topic Hypothesis) (cf. section 2.1.1.1.2). I will show that both analyses are compatible with the LF c-command condition on NPI licensing.

Under the Subject Hypothesis, sentence (137) above has the following representation:

(138)



This representation shows that the preverbal subject NPI *walaw ṭālib* in Spec, TP originates in a post-verbal (post-negative) position in Spec, VP. Thus, the Subject Hypothesis assumes that preverbal subject NPIs that surface in a position preceding their licenser are assumed to be in the c-command domain of that licenser at LF.

Under the Topic Hypothesis, the LF c-command condition on NPI licensing predicts that, in contrast to non-NPI preverbal subjects, NPI preverbal subjects cannot be related to a null resumptive pronominal inside an island.[7] This is because clitic-left dislocated elements that are related to a clitic (or a null resumptive pronominal in the case of preverbal subjects) inside an island are assumed to be based-generated in their surface position as discussed earlier. This prediction is borne out as shown in the following examples:

[7] I am assuming a Topic Hypothesis of preverbal subjects in Arabic that is updated with the assumption that clitic-left dislocation constructions involve either movement or base-generation depending on whether a left-dislocation construction displays reconstruction effects or not as suggested by Aoun and Benmamoun (1998) and Aoun et al. (2010).

(139) a. **l-wlād** nādya zaʕlit laʔənn-hum ma-ħallu l-ʔasʔilih.
the-boys Nadia got-angry.3SF because-them NEG-answered.3PM the-questions
'Nadia got angry because the boys did not answer the questions.'

b. **l-wlād** samiʕit iʃāʕit ʔənn-hum ma-ħallu l-ʔasʔilih.
the-boys heard.1S rumor that-them NEG-answered.3PM the-questions
'I heard the rumor that the boys did not answer the questions.'

(140) a.***walaw** ṭālib nādya zaʕlit laʔənn-uh ma-ħall l-ʔasʔilih.
even student Nadia got-angry.3SF because-him NEG-answered.3S the-questions
'Nadia got angry because even (one) student did not answer the questions.'

b.***walaw** ṭālib samiʕit iʃāʕit ʔənn-uh ma-ħall l-ʔasʔilih.
even student heard.1S rumor that-him NEG-answered.3S the-questions
'I heard the rumor that even (one) student did not answer the questions.'

The examples in (139) show that a non-NPI preverbal subject can be related to a clitic inside an Adjunct Island (139a) or a Complex NP Island (139b). The examples in (140), on the other hand, show that an NPI preverbal subject cannot be related to a clitic inside an Adjunct Island (140a) or a Complex NP Island (140b).[8] This strongly suggests that preverbal subject NPIs need to reconstruct to a position in the c-command domain of their licenser at LF.

One more piece of evidence on the LF c-command condition on NPI licensing in JA comes from NPIs that are restricted to a post-verbal position in simple sentences in the language. We have previously seen that, in contrast to the NPIs *walaw*, *fils aħmar*, and *ʕumur*, other NPIs in JA cannot surface in a preverbal (pre-negative) position in simple sentences. These NPIs include *ħada*-NPs (141), *iʃi*-NPs (142), and indefinite-*ʔayy*-DPs (143):

[8] Notice that the null resumptive clitic to which preverbal subjects are related surfaces as an accusative pronominal after the complementizers *laʔənn* 'because' and *ʔənn* 'that'. Mohammed (2000) attributes this to the observation that complementizers in Arabic never allow an empty subject to follow them, and that they assign accusative case to their complement.

(141) a.*ħada ma-d͡ʒa.
One NEG-came.3S
'No one came.'

b.*ħada Maryam ma-ʃāfat-(uh).
one Mary NEG-saw.3SF-him
'Mary did not see anyone.'

(142) a.*iʃi ma-ṣār.
thing NEG-happened.3S
'Nothing happened.'

b.*iʃi Maryam ma-akalat-(uh).
thing Mary NEG-ate.3SF-(it)
'Mary did not eat anything.'

(143) a.*ʔayy ṭālib ma-ħall s-suʔāl.
which student NEG-answered.3S the-question
'No student answered the question?'

b.*ʔayy suʔāl Maryam ma-ħallat-(uh).
which question Mary NEG-answered.3SF-(it)
'Mary did not answer any question?'

At first sight, these NPIs seem to require a surface structure c-command condition on their licensing. In other words, these NPIs seem to need to be in the c-command domain of their licenser at surface structure. However, what is interesting about these NPIs is that they can appear preverbally and precede negation if they are embedded in a focus-fronted clause as shown in the following examples:

(144) ʔənnu Maryam ðarabat ħada *(ma)-basaddig.
that Mary hit.3SF one NEG-believe.1S
'I do not believe that Mary hit anyone.'

(145) ʔənnu Maryam saraqat iʃi *(ma)-batwaqaʕ.
that Mary stole.3SF thing NEG-expect.1S
'I do not expect that Mary stole anything.'

(146) ʔənnu Maryam ħallat **ʔayy** suʔāl *(ma)-baðinn
that Mary answered.3SF which question NEG-believe.1S
'I do not think that Mary answered any question.'

These examples include an NPI embedded within a focus-fronted phrase, in violation of the surface structure c-command condition on NPI licensing. There is no surface structure c-command relation between negation and the NPI in all of the examples above. However, there is such a relation at LF if we assume that focus-fronted elements involve movement. At LF, the focus-fronted clause embedding the NPI in all of the examples above is assumed to reconstruct to a position within the c-command domain of negation. Similar facts have been reported about *any* in English (Ross 1967; Linebarger 1981), Dutch NPIs (Hoeksema 1997; de Swart 1998), and Greek NPIs (Giannakidou 1998).

All in all, the (Non-)veridicality Analysis of NPIs licensing presented in this subsection proposes that the distribution of NPIs depends on the (non-)veridicality of the context of appearance. This analysis approaches the distributional differences between NPIs and NCIs by arguing that NPIs are existential quantifiers that need to be in the c-command domain of a non-veridical operator at LF; whereas NCIs are universal quantifiers that need to be anywhere an anti-veridical context. The (Non-)veridicality approach has been shown to fare better than all of the previous approaches in accounting for the distribution of NPIs in JA. NPIs in JA have been shown to be grammatical only in contexts that are non-veridical. NPIs in JA have also been shown to require an LF c-command condition on their licensing.

The remaining question is why, in contrast to other NPIs in the language, *ħada*-NPs, *ɨfi*-NPs, and indefinite-*ʔayy*-DPs in JA cannot precede negation unless they are embedded in a larger constituent. I devote the rest of this chapter for discussing this contrast between NPIs in JA.

The contrast in the distribution of NPIs with regard to negation in simple sentences has previously been observed in Arabic, namely Moroccan Arabic and Standard Arabic. Benmamoun (1996) noticed that some NPIs in Arabic, such as the indefinite nominals headed by the scalar focus particle *ħətta* 'even' in Moroccan Arabic, can appear in a preverbal (pre-negative) as well as a post-verbal (post-negative) position:

(147) a. ma-ʒa **ħətta** wəld.
NEG-came.3S even boy
'No boy came.'

b. ma-qrit **ħətta** ktab.
NEG-read.1S even book
'I did not read any book.'

c. **ħətta** wəld ma-ʒa.
even boy NEG-came.3MS
'No boy came.'

d. **ħətta** ktab ma-qrit.
even book NEG-read.1S
'I did not read any book.'

(Moroccan Arabic: Benmamoun 1996)

In contrast to these NPIs, Benmamoun noticed that other NPIs in Arabic are restricted to a post-verbal (post-negative) position. These include NPIs like the indefinite pronoun *ħədd* 'anyone' in Moroccan Arabic (148) and indefinite-*ʔayy*-DPs in Standard Arabic (149):

(148) a. ma-ʒa **ħədd**.
NEG-came.3s one
'No one came.'

b. ma-ʃəft **ħədd**.
NEG-saw.1s one
'I did not see anyone.'

c.***ħədd** ma-ʒa
one NEG-came.3s
'No one came.'

d.*ħədd ma-tlaqit-u.
one NEG-met-1s-3s
'I did not see anyone.'

(Moroccan Arabic: Benmamoun 1996)

(149) a. lam yaḥḍur **ʔayy-u** walad-in.
NEG.PAST come.3S which-NOM boy-GEN
'No boy came.'

b. l-walad-u lam yaḥil **ʔayy-a** suʔāl-in.
the-boy-NOM NEG.PAST answer.3SM which-ACC question.GEN
'The boy did not answer any question.'

c.***ʔayy-u** walad-in lam yaḥḍur.
which-NOM boy-GEN NEG.PAST come.3S
'No boy came.'

d.***ʔayy-a** suʔāl-in l-walad-u lam yaḥil.[9]
which-ACC question.GEN the-boy-NOM NEG.PAST answer.3SM
'The boy did not answer any question.'

Benmamoun argues that this contrast in the distribution of these two classes of NPIs follows from a general rule that bans non-specific indefinites from occuring in a preverbal position in Arabic. He shows that indefinite NPs can appear in a preverbal position only when

[9] Like the case in JA, indefinite-*ʔayy*-DPs in Standard Arabic can have a wh-reading besides the indefinite reading. Sentences (149c) and (149d) are acceptable in Standard Arabic under the wh-reading:

a. **ʔayy-u** walad-in lam yaḥḍur?
which-NOM boy-GEN NEG.PAST come.3S
'Which boy did not come?'

b. **ʔayy-a** suʔāl-in l-walad-u lam yaḥil?
which-ACC question.GEN the-boy-NOM NEG.PAST answer.3SM
'Which question did not the boy answer?'

they have a specific interpretation in Arabic as shown in the following examples from Moroccan Arabic:

(150) a. ʒa ʃi **wəld**.
came.3SM some boy
'Some boy came'

b. ʃi **wəld** ʒa.
some boy came.3SM
'Some boy (certain boy) came'

(Moroccan Arabic: Benmamoun 1996: 62)

While (150a) is well-formed regardless of whether the post-verbal indefinite subject has a specific or a non-specific reading, (150b) can be grammatical only when the preverbal indefinite subject has a specific interpretation. Consequently, Benmamoun argues that the inability of NPIs like *ħədd*-NPs in Moroccan Arabic and indefinite-*ʔayy*-DPs in Standard Arabic to surface in a preverbal position follows from their status as non-specific indefinites. As for NPIs like *ħətta*-phrases in MA, he assumes that these phrases can surface in a preverbal position as their non-specificity is circumvented by virtue of having the focus or presupposition particle *ħətta*. The focus particle allows *ħətta*-phrases to occur in a preverbal position, a position where focused elements can occur in the language.

In short, Benmamoun's analysis mainly relies on the ban against non-specific indefinites occuring in a preverbal position in Arabic. Some NPIs cannot occur preverbally because they are non-specific indefinites; whereas other NPIs can occur preverbally because their non-specificity is circumvented in some way (e.g. having a focus particle).

In what follows, I will show that Benmamoun's analysis is on the right track and that it extends to JA. However, I will show that it does not explain why some indefinite NPIs can circumvent the ban on preverbal non-specific indefinites; whereas others cannot. On one hand,

NPIs that can appear preverbally in JA regardless of whether they are embedded in a larger constituent or not include *walaw*-phrases, the idiomatic expression *fils aħmar*, and the indefinite temporal adverb *ʕumur*:

(151) a. **walaw** ṭālib *(ma)-ħall s-suʔāl.
even student NEG-answered.3S the-question
'Even (one) student did not answer the question.'

b. **walaw** suʔāl Maryam *(ma)-ħallat-(uh).
even question Mary NEG-answered.3SF-(it)
'Mary did not answer any question.'

(152) **fils aħmar** Maryam *(ma)-ṣarafat-(uh).
cent red Mary NEG-spent.3SF-(it)
'Mary did not spend a red cent.'

(153) **ʕumur** Maryam *(ma)-ħallat l-wād͡ʒib.
ever Mary NEG-answered.3SF the-assignment
'Mary has not ever answered the assignment.'

Following Benmamoun, we can assume that these NPIs can appear preverbally because their non-specificity is circumvented in some way or because they are not subject to the non-specificity restriction on preverbal elements. Thus, *walaw*-phrases can appear preverbally because they involve the focus particle *walaw*; the idiomatic expression *fils aħmar* can appear preverbally because it involves the indefinite noun *fils* being modified by the adjective *aħmar* (the modification of an indefinite by an adjective is one of the common strategies used to circumvent the ban against non-specific indefinites occurring preverbally in Arabic (Mohammed, 2000); and finally the indefinite adverb *ʕumur* can occur preverbally because adverbs are not subject to the ban on preverbal non-specific indefinite elements in the language.

On the other hand, NPIs that cannot occur preverbally unless they are embedded in a larger constituent in JA include *ħada*-NPs, *iʃi*-NPs, and indefinite-*ʔayy*-DPs. As Benmamoun's analysis predicts, these NPIs cannot occur preverbally because they are non-specific indefinites. However, Benmamoun's analysis does not explain the incompatibility of these NPIs with the strategies that are commonly used to circumvent the ban on non-specific preverbal NPs in the language. The NPIs *ħada*-NPs, *iʃi*-NPs, and indefinite-*ʔayy*-DPs cannot occur preverbally in JA even when they combine with the focus particle *walaw*, and even when they are modified by an adjective:

(154) a.***walaw ħada** ma-d͡ʒa.
even one NEG-came.3S
'Even (one) person did not come.'

b.***ħada ṭawīl** Maryam ma-ʃāfat-(uh).
one tall Mary NEG-saw.3SF-him
'Mary did not see any tall person.'

(155) a.***walaw iʃi** ma-ṣār.
even thing NEG-happened.3S
'Even (one) thing did not happen.'

b.***iʃi ħāmið** Maryam ma-akalat-(uh).
thing sour Mary NEG-ate.3SF-(it)
'Mary did not eat any sour thing.'

(156) a.***walaw ʔayy ṭālib** ma-ħall s-suʔāl.
even which student NEG-answered.3S the-question
'Even (one) student did not answer the question.'

b.***ʔayy suʔāl ṣaʕəb** Maryam ma-ħallat-(uh).
which question difficult Mary NEG-answered.3SF-(it)
'Mary did not answer any difficult question.'

These examples show that Benmamoun's analysis does not explain why the preverbal NPIs in (154-156) are still unacceptable. If some NPIs are restricted to a post-verbal position because of their status as non-specific indefinites, it is not clear then why these NPIs cannot appear preverbally even when their non-specificity is circumvented by the common strategies that are used to circumvent this ban on preverbal non-specific indefinites in the language.

I argue that the NPIs *ħada*-NPs, *iʃi*-NPs, and indefinite-*ʔayy*-DPs in JA and their equivalents in other Arabic dialects are restricted to a post-verbal position when they are not embedded in a larger constituent because of their status as referentially non-specific expressions. These expressions are non-referential in the sense that they can only denote an identity of a general nature and thus their meaning suppresses reference to specific persons or things. Thus, unlike other indefinites in the language, these expressions cannot introduce a specific indefinite at all, even when they combine with a focus particle or when they are modified by an adjective.

This analysis predicts that bare fronting of *ħada*-NPs, *iʃi*-NPs, and indefinite-*ʔayy*-DPs is not allowed even in embedded clauses under negation at surface structure. This prediction is borne out as shown in the following examples:

(157) a.*ma-samaʕit ʔənnu **ħada** d͡ʒa.
NEG-heard.1S that one came.3S
'I did not hear that someone came.'

b.*ma-samaʕit ʔənnu **ħada** Maryam ʃāfat-(uh).
NEG-heard.1S that one Mary saw.3SF-him
'I did not hear that Mary saw anyone.'

(158) a.*ma-samaʕit ʔənnu **iʃi** ṣār.
NEG-heard.1S that thing happened.3S
'I did not hear that something happened.'

b.*ma-samaʕit ʔənnu **iʃi** Maryam akalat-(uh).
NEG-heard.1S that thing Mary ate.3SF-(it)
'I did not hear that Mary ate something.'

(159) a.*ma-samaʕit ʔənnu **ʔayy** ṭālib ħall s-suʔāl.
NEG-heard.1S that which student answered.3S the-question
'I did not hear that any student answered the question.'

b.*ma-samaʕit ʔənnu **ʔayy** suʔāl Maryam ħallat-(uh)?
NEG-heard.1S that which question Mary answered.3SF-(it)
'I did not hear that Mary answered any question.'

The NPIs in these examples move locally inside the lower clause, thus remaining in the c-command domain of negation at surface structure. However, these sentences are still ungrammatical because the NPIs are non-specific indefinites and thus they cannot appear in a preverbal position. If the NPIs included in the sentences above were merely subject to a c-command condition, the sentences in (157-159) should be grammatical, contrary to fact. Note here that fronting of non-NPI elements in embedded clauses is allowed in the language as shown in the following examples:

(160) a. ma-samaʕit ʔənnu Layla kasarat **ʃ-ʃibbāk**.
NEG-heard.1S that Layla broke.3SF the-window
'I did not hear that Layla broke the window.'

b. ma-samaʕit ʔənnu **ʃ-ʃibbāk** Layla kasarat-(uh).
NEG-heard.1S that the-window Layla broke.3SF-(it)
'I did not hear that Layla broke the window.'

The same facts have been reported about non-emphatic NPIs in Greek: non-emphatic NPIs in a lower clause in Greek cannot move locally to a preverbal position inspite of the fact that they are still in the c-command domain of negation at surface structure, and inspite of the fact that other non-NPI elements can move locally to a preverbal position in the language (Giannakidou 1998).

4.2 Summary and Conclusion

This chapter has focused on the licensing conditions on the set of NSIs that function as NPIs in JA. The licensing of NPIs in JA has been discussed in light of previous theories of NPIs in other languages, namely English and European languages. Five different theories were introduced and tested against data from JA. These theories include the Surface Structure Approach of Lasnik (1975) and Jackendoff (1969, 1972), The Downward Entailment Approach of Ladusaw (1980, 1982, 1983), the Negative Implicature Approach of Linebarger (1981, 1987), the Binding Approach of Progovac (1988, 1993, 1994), and the (Non-)veridicality Approach of Giannakidou (1998, 1999, 2000, 2002, 2006, 2011). The basic premises of each of these Approaches are summarized in the following table:

Table 2: Approaches to NPI licensing: basic proposals

	Approach	Proposal
1	The Surface Structure Approach (Lasnik 1975; Jackendoff 1969, 1972)	NPIs need to be in the c-command domain of a negative marker in the surface syntax.
2	The Downward Entailment Approach (Ladusaw 1980, 1982, 1983)	NPIs need to be in the scope of a downward entailing function.
3	the Negative Implicature Approach (Linebarger 1981, 1987)	NPIs need to be in the immediate scope of a negative operator that can be either overt or implied in the context.
4	The Binding Approach (Progovac 1988, 1993, 1994)	NPIs are anaphoric and thus are subject to Binding Principles.
5	The (Non-)veridicality Approach Giannakidou (1998, 1999, 2000, 2002, 2006, 2011)	NPIs are existential quantifiers that need to be in the c-command domain of a non-veridical operator at LF.

The first four theories have been shown to fall short of accounting for the distribution of NPIs in JA. The Surface Structure Accounts focus mainly on English NPIs in sentences with overt negation and propose that an NPI needs to surface in a position that is in the c-command domain of the negative marker that licenses it. In addition to its confusion of NCIs with NPIs,

and its neglect of negative-like contexts that can license NPIs, these accounts do not extend to JA because NPIs in JA can occur in a preverbal position where they surface in a position preceding the negative marker that licenses them.

The Downward Entailment Theory focuses on the distribution of NPIs in English. It proposes that an NPI needs to be in the scope of a downward entailing expression (i.e expressions that allow inferences from supersets to subsets). The Downward Entailment Theory also requires an NPI to be in the c-command domain of its licenser at surface structure when both the NPI and its licenser occur in the same clause. In addition to its confusion of NCIs with NPIs, the Downward Entailment theory has been shown to be lacking because NPIs in JA can occur in contexts that are not downward entailing such as interrogatives, habituals, future sentences, and imperatives; and because some NPIs in JA can precede their licenser when both the NPI and its licenser occur in the same clause.

The Negative Implicature Theory also relies on the distribution of NPIs in English. It proposes that NPIs need to be in the immediate scope of either overt negation or implied negation. Like the Surface Structure Accounts and the Downward Entailment Theory, this theory confuses NCIs with NPIs. In addition, the notions of immediate scope and implied negation are not as strict as the theory predicts. For example, data from JA show that NPIs are grammatical in contexts that do not give rise to a negative implicature such as habituals and future sentences, and that some NPIs are ungrammatical even though they are in the immediate scope of negation.

The Binding Analysis focuses on the distribution of NPIs in Serbian/Croatian. It also considers some minor data from English and some other languages. It proposes that NPIs are subject to the same binding principles that constrain the distribution of anaphors. Potential binders for NPIs are either overt negation or an empty operator (Op) generated in Comp in

negative-like contexts. Op is assumed to be present only in contexts that are not upward entailing An advantage of this analysis over all previous approaches is that it acknowledges the fact that NSIs (i.e. NCIs and NPIs) display important distributional differences that need to be explained in any adequate theory of NSIs licensing. However, this analysis equates NCIs with NPIs and approaches their distributional differences by proposing different binding principles on their licensing. For example, this analysis suggests that NI-NPIs in Serbian/Croatian are subject to Principle A of the Binding Theory; whereas I-NPIs are subject to both Principle A and Principle B. The Binding Analysis does not extend to JA. First, NPIs in JA are grammatical in contexts that are upward entailing such as habituals and future sentences. Second, NPIs in JA seem to require no binding principle on their licensing. NPIs in JA are grammatical with both clause-mate negation and superordinate negation. They are also grammatical inside islands which indicates that they do not raise but are rather licensed in situ. That NPIs are licensed in situ, and that they are grammatical with both clause-mate negation and superordinate negation makes it clear that they are not subject to any binding principle.

The (Non-)veridicality Approach has been shown to fare better than all previous approaches in accounting for the distribution of NPIs in JA. This approach focuses on the distribution of NPIs in Greek. It also considers some minor data from English and some other languages. It proposes that the grammaticality of NPIs depends on the (non-)veridicality of the context of appearance. Like the Binding Analysis, the (Non-)veridicality Approach involves both NCIs and NPIs. It approaches the distributional differences between these two sets of NSIs by proposing different conditions on their licensing in terms of (non-)veridicality. NPIs are existential quantifiers that need to be in the c-command domain of a non-veridical operator at LF; whereas NCIs are universal quantifiers that need to be anywhere in an anti-veridical context.

The (Non-)veridicality Approach has been shown to extend to the set of NSIs that function as NPIs in JA. First, NPIs in JA can be grammatical only in contexts that are non-veridical. Second, NPIs in JA need to be in the c-command domain of their licenser at LF. Supporting evidence for the LF c-command condition on NPI licensing in JA comes from focus-fronting constructions, clitic-left dislocation constructions, and from NPIs that are restricted to a post-verbal (post-negative) position in simple sentences. NPIs in JA have been shown to be able to participate in focus-fronting constructions and in clitic-left dislocation constructions that are derived by movement rather than base-generation. This is necessary because NPIs need to reconstruct to a position in the c-command domain of their licenser at LF. NPIs that are restricted to a post-verbal (post-negative) position have been shown to be able to appear preverbally when they are embedded in a larger constituent that can participate in movement constructions. This is possible because an NPI that is part of an extracted constituent can reconstruct to a position inside the c-command domain of its licenser at LF. The ungrammaticality of bare fronting of some NPIs in JA has been ascribed to their violation of a general rule that bans non-specific indefinites to occur preverbally in Arabic. These NPIs have been shown to be referentially non-specific in the sense that they denote an entity of a general nature and hence they can never be specific.

Chapter Five

The Licensing of Negative Concord Items in Jordanian Arabic

This chapter discusses the licensing of NCIs in JA. It first introduces the linguistic phenomenon of Negative Concord (NC) and then reviews the different theories that have been proposed to handle it in light of data from JA and other languages. Data from JA show that none of the theories that have been proposed for NC can account for the distribution of NCIs in JA. For this, an alternative account of NC is proposed which is basically a crucial modification of one approach that takes NC to be a manifestation of syntactic agreement between an NCI and a semantic negation in the clause where syntactic agreement is defined in terms of feature checking following recent assumptions within Minimalism. I will show that this alternative account can explain the distribution of NCIs in JA and at least one other variety of spoken Arabic, namely Moroccan Arabic. I will also show that this account extends to other NC-languages such as Polish and Spanish and is thus supported cross-linguistically.

5.1 Negative Concord

Negative Concord refers to the phenomenon whereby a negative constituent fails to contribute negation to the interpretation when it co-occurs with another negative constituent. Consider the following sentence from Italian:

(1) Maria **non** ha visto **nessuno**.
Maria NEG has seen NCI-person
'Maria hasn't seen anybody.'

(Italian: Penka 2011: 14)

Sentence (1) involves the NCI *nessuno* co-occurring with the sentential negative marker *non*; however, the interpretation involves only one instance of negation. Only the negative marker *non*

seems to have contributed negation to the semantics in this sentence; whereas the NCI *nessuno* seems to have failed to do so. Recall that NCIs can provide negative fragment answers and thus they can contribute negation on their own. I define Negative Concord as in (2) below:

(2) Negative Concord:

> The failure of a negative constituent to contribute negation to the interpretation when it co-occurs with another negative constituent.

Three different kinds of NC-constructions have been discussed in the literature. These include Negative Doubling, Negative Spread, and Negative Doubling and Spread (Den Besten 1986, 1989; Van der Wouden & Zwarts 1993; Van der Wouden 1997; Zeijlestra 2004):

(3) Negative Doubling:

> The failure of an NCI to contribute negation to the interpretation when it co-occurs with a sentential negative marker.

(4) Negative Spread:

> The failure of an NCI to contribute negation to the interpretation when it co-occurs with another NCI.

(5) Negative Doubling and Spread:

> The failure of multiple NCIs to contribute negation to the interpretation when they co-occur with a sentential negative marker.

Negative Doubling, Negative Spread, and Negative Doubling and Spread are illustrated in the examples in (6), (7), and (8) respectively below:

(6) a. Jean **ne** dit **rien**
John NEG says NCI-thing
'John doesn't say anything.'

(French: Zeijlstra 2004: 62)

b. 'k **En** een **geen** geld
I NEG have no money
'I don't have any money.'

(West Flemish: Zeijlstra 2004: 62)

(7) a. **Nessuno** ha telefonato a **nessuno**
NCI-body has telephoned to NCI-body
'Nobody called anybody.'

(Italian: Zeijlstra 2004: 62)

b. T ee **niemand** **niets** gezeid
It has NCI-body NCI-thing said
'Nobody said anything.'

(West Flemish: Zeijlstra 2004: 62)

(8) a. **Personne** **ne** mange **rien**
NCI-body NEG eats NCI-thing
'Nobody eats anything.'

(French: Zeijlstra 2004: 62)

b. Valère **en** klaapt **nie** tegen **niemand**
Valère NEG talks NCI-ever against NCI-body
'Valère doesn't ever talk to anyone.'

(West Flemish: Zeijlstra 2004: 62)

Natural languages do not show any typological differences with regard to the three NC-constructions discussed above. That is to say, all NC-languages exhibit all of the three kinds of NC-constructions discussed above (Zeijlstra 2004).

However, NC-languages differ with respect to whether an NCI must always be accompanied by a negative marker, thus manifesting two varieties of NC. On one hand, there are languages in which NCIs must always co-occur with a negative marker. Polish is one such language as illustrated in (9) below. On the other hand, there are languages in which post-verbal

NCIs must co-occur with a negative marker; whereas preverbal NCIs must not. Italian is one such language as illustrated in (10) below:

(9) a.*(**nie**) wyjechało **żadne** dziecko na wakacje.
NEG went NCI-DET child on holiday
'No child went on holiday.'

b. **Żadne** dziecko *(**nie**) wyjechało na wakacje.
NCI-DET child NEG went on holiday
'No child went on holiday.'

(Polish: Błaszczak 2001: 217)

(10) a.*(**non**) ho visto **nessuno**.
NEG have.2SG seen NCI-person
'I haven't seen anybody.'

(Italian: Zanuttini 1991: 108)

b. **Nessuno** (***non**) ha visto Mario.
NCI-person NEG has seen Mario.
'Nobody saw Mario'

(Italian: Zanuttini 1991: 111)

For languages like Italian, the co-occurrence of a preverbal NCI and a negative marker is not totally excluded. In fact, a preverbal NCI and a negative marker co-occurring in the same clause in languages like Italian can be grammatical with a double negation reading, but never a concordant reading:

(11) a. **Nessuno** **non** ha mangiato.
NCI-person NEG has eaten
'Nobody didn't eat.' (= 'Everyone ate'.)
*'Nobody ate.'

(Italian: Penka 2011: 19)

This example shows that a preverbal NCI that is accompanied by a negative marker can only induce a double negation reading, but never a concordant reading.

Languages like Polish in which NCIs must co-occur with a negative marker regardless of their position in a clause under a concordant reading, but never a double negation reading are referred to as strict NC-languages by Giannakidou (1998, 2000); whereas languages like Italian in which only post-verbal NCIs must co-occur with a negative marker under a concordant reading are referred to as non-strict NC-languages by Giannakidou (1998, 2000):

(12) Strict NC-languages:

> Languages in which NCIs must always co-occur with a negative marker, and the combination of an NCI and a negative marker never yields a double negation reading.

(13) Non-strict NC-languages:

> Languages in which only post-verbal NCIs must co-occur with a negative marker; whereas preverbal NCIs co-occurring with a negative marker yield a double negation reading, but never a concordant reading.

5.2 Negative Concord in JA

JA exhibits all three kinds of NC-constructions discussed in the literature: Negative Doubling, Negative Spread, and Negative Doubling and Spread. These three kinds of NC-constructions are illustrated in (14), (15), and (16) from JA respectively below:

(14) Maryam *(**ma**)-ħakat **wala** kilmih.
Mary NEG-said.3SF NCI-DET word
'Mary did not say any word.'

(15) **wala** ṭālib ħall **wala** suʔāl.
NCI-DET student answered.3S NCI-DET question
'No student answered any question.'

(16) Maryam *(**ma**)-katabat **wala** baħəθ **lahassa**.
Mary NEG-wrote.3SF NCI-DET paper NCI-time.
'Mary has not written any paper yet.'

Example (14) involves the NCI *wala* combined with the negative marker *ma-*, thus manifesting Negative Doubling. Example (15) involves two occurrences of the NCI *wala*, thus manifesting Negative Spread. Example (16) involves the NCIs *wala* and *lahassa* combined with the negative marker *ma-*, thus manifesting Negative Doubling and Spread. These examples confirm the observation that NC-languages do not show any simple parametric differences with regard to the three kinds of NC-constructions discussed above.

We have seen that NC-languages are classified as either strict or non-strict NC-languages. No languages that involve both varieties of NC have been reported in the literature. However, JA exhibits both strict NC and non-strict NC. On one hand, the *never*-words and the *not-yet*-words must always be accompanied by a negative marker regardless of whether they appear in a post-verbal or preverbal position:

(17) a. Maryam *(ma)-btōkil tuffāħ **bilmarrah**.
Mary NEG-eat.3SF apples NCI-time
'Mary does not eat apples at all.'

b. **bilmarrah** Maryam *(ma)-btōkil tuffāħ.
NCI-time Mary NEG-eat.3SF apples
'Mary does not eat apples at all.'

(18) a. Maryam *(ma)-ʃtarat l-ktāb **laħaddəlʔān**.
Mary NEG-bought.3SF the-book NCI-time
'Mary has not bought the book yet.'

b. **laħaddəlʔān** Maryam *(ma)-ʃtarat l-ktāb.
NCI-time Mary NEG-bought.3SF the-book
'Mary has not bought the book yet.'

On the other hand, the scalar focus particle *wala* must be accompanied by the negative marker in a post-verbal position, but not in a preverbal position:

(19) a.*(ma)-d͡ʒa **wala** wāħad.
NEG-came.3S NCI-DET one.
'No one came.'

b. **wala** wāħad (*ma)-d͡ʒa.
NCI-DET one NEG-came.3S
'No one came.'

Preverbal *wala*-phrases that are accompanied by a negative marker can only by grammatical with a double negation reading, but never a concordant reading:

(20) **wala** wāħad ma-d͡ʒa.
NCI-DET one NEG-came.3S
'No one did not come.'

Thus, while the *never*-words and the *not-yet*-words exhibit strict NC, *wala*-phrases exhibit non-strict NC. This suggests that a classification of NC as either strict or non-strict at the level of language is not adequate. JA does not fit into either of these categories as it involves both varieties of NC. Rather, strict NC and non-strict NC should apply at the level of the lexical item: an NCI can be either strict or non-strict (cf. Hoyt 2010):

(21) Strict NCIs:

NCIs that must always co-occur with a negative marker, and the combination of an NCI and a negative marker never yields a double negation reading.

(22) Non-Strict NCIs:

NCIs that must co-occur with a negative marker only when they appear in a post-verbal position; whereas the combination of a preverbal NCI with a negative marker yields a double negation reading, but never a concordant reading.

5.3 Theories of Negative Concord

The phenomenon of NC has been a central issue in linguistic research for decades. The main question surrounding the phenomenon is whether NCIs are inherently negative or not. On one hand, NCIs seem to be inherently negative as they can express negation on their own in constructions like fragment answers (23) and in preverbal position in the case of non-strict NCIs (24):

(23) A: mīn d͡ʒa?
who came.3S
'Who came?'

B: **wala** wāħad.
NCI-DET one
'No one.'

(24) **wala** wāħad d͡ʒa.
NCI-DET one came.3S
'No one came.'

On the other hand, NCIs seem to be inherently non-negative as they fail to express negation on their own when, for example, they occur in a post-verbal position:

(25) *(ma)-d͡ʒa **wala** wāħad.
NEG-came.3S NCI-DET one
'No one came.'

Sentences like (25) constitute a serious puzzle for the Principle of Compositionality (Davidson 1967), which states that the meaning of a sentence should reflect the meaning of its individual words. That is, if NCIs do really have some inherent negative force, why does a sentence like (25) above fail to express a meaning with double negation as it involves both the negative marker *ma-* and the NCI *wala*?

Four different approaches have been proposed to solve the puzzle of the inherent negative/non-negative meaning of NCIs. The first approach suggests that all NCIs are non-negative NPIs that are licensed either by overt or covert negation. The second approach considers all NCIs to be negative quantifiers and suggests a semantic or syntactic process whereby the negative meaning of NCIs is absorbed. The third approach takes NCIs to be ambiguous between a negative quantifier reading and a non-negative NPI reading. The fourth approach considers NCIs to be neither negative quantifiers nor non-negative NPIs; rather, it suggests that NCIs are non-negative indefinites that function as markers of sentential negation and that NC is a reflection of a process of syntactic agreement with respect to sentential negation.

The goal of this chapter is to discuss and evaluate all these theories of NC in light of data from JA. I will show that the approach that takes NCIs to be non-negative indefinites that function as markers of sentential negation fares better than the other approaches in explaining NC in JA. However, I will show that this approach needs to be modified to account for the data from JA. Approaches that consider NCIs to be either negative quantifiers or non-negative NPIs will be shown to be incapable of capturing the facts in JA.

5.3.1 The Non-negative NPIs Approach

The accounts presented in this subsection suggest that NCIs should be treated as non-negative NPIs. Here, it is argued that NCIs lack any intrinsic negative meaning and that they function as NPIs that need to be licensed either by overt or covert negation. These accounts face the challenge of explaining why NCIs can sometimes contribute negative force, for instance when they are used as fragment answers.

Four different approaches have been proposed where NCIs are considered to be NPIs. In 5.3.1.1, I discuss the ΣP Analysis of Laka (1990). In 5.3.1.2, I discuss the Relative Strength of Negation Analysis of van der Wouden (1997) and Zwarts (1996, 1998). In 5.3.1.3, I describe the Binding Analysis of Progovac (1988, 1993, 1994). In 5.3.1.4, I address the (Non-)veridicality Analysis of Giannakidou (1998, 2000, 2006).

5.3.1.1 The ΣP Analysis

Laka (1990) argues that NCIs are best analyzed as NPIs. Her analysis is mainly based on the distribution of NCIs in Spanish, a language with non-strict NCIs. Post-verbal NCIs in Spanish must be combined with a negative marker; whereas preverbal NCIs must not:

(26) a.*(No) vino **nadie**.
NEG came NCI-person
'Nobody came.'

b. **Nadie** (*no) vino.
NCI-person NEG came
'Nobody came.'

(Spanish: Laka 1990:104)

Both post-verbal and preverbal NCIs in Spanish are considered to be NPIs. Laka explains the contrast between post-verbal and preverbal NCIs in Spanish by arguing that post-verbal NCIs

are licensed by an overt negative marker; whereas preverbal NCIs are licensed by a covert negative operator that heads a functional projection she names ΣP. ΣP is assumed to host operators such as sentential negation and emphatic affirmation. NCIs in preverbal position are assumed to occupy the specifier position of ΣP and to be licensed under Spec-head agreement with the alleged covert negative operator in the head of ΣP. Thus, preverbal NCIs in Spanish are assumed to be ungrammatical with overt negation as they can be licensed by a covert negative operator that is already present in the sentence.

Laka further argues that a covert negative head in ΣP can only be licensed when there is an overt element in Spec, ΣP. This argument is needed in order to account for the following contrast in the licensing of post-verbal NCIs:

(27) a. Juan *(no) come **nada**.
Juan NEG eats NCI-thing
'Juan does not eat anything.'

b. **Nadie** come **nada**.
NCI-person eats NCI-thing
'Nobody eats anything.'

(Spanish: Penka 2011: 21)

In (27a), there is no element in Spec, ΣP, and thus the negative head needs to be overt in order to license the post-verbal NCI *nada*. In (27b), on the other hand, the preverbal NCI *nadie* is assumed to be in Spec, ΣP thus licensing the covert negative head which, in turn, licenses the post-verbal NCI *nada*.

Laka's proposals face different problems with regard to NCIs in JA. First, her analysis accounts only for non-strict NCIs and does not extend to strict NCIs. This analysis predicts that strict NCIs as well as non-strict NCIs must not be combined with an overt negative marker when they appear in a preverbal position. This prediction is not borne out. The *never*-words and the

not-yet-words, which function as strict NCIs in JA, must always be accompanied by an overt negative marker regardless of whether they appear in a post-verbal or a preverbal position:

(28) a. Maryam *(ma)-btōkil tuffāħ **bilmarrah**.
Mary NEG-eat.3SF apples NCI-time
'Mary does not eat apples at all.'

b. **bilmarrah** Maryam *(ma)-btōkil tuffāħ.
NCI-time Mary NEG-eat.3SF apples
'Mary does not eat apples at all.'

(29) a. Maryam *(ma)-ʃtarat l-ktāb **laħaddəlʔān**.
Mary NEG-bought.3SF the-book NCI-time
'Mary has not bought the book yet.'

b. **laħaddəlʔān** Maryam *(ma)-ʃtarat l-ktāb.
NCI-time Mary NEG-bought.3SF the-book
'Mary has not bought the book yet.'

These examples are problematic for Laka's analysis because this analysis does not make any distinction between strict and non-strict NCIs: both strict and non-strict NCIs are argued to be NPIs that are subject to the same licensing conditions. Thus, both strict and non-strict NCIs should be able to be licensed by the abstract negative operator in ΣP, which is not the case in JA.

Second, Laka's analysis wrongly predicts that elements that function as genuine NPIs in JA must be accompanied by an overt negative marker only when they appear in a post-verbal position. In fact, elements that function as NPIs in JA must always be accompanied by an overt negative marker regardless of whether they appear in a post-verbal or a preverbal position. Consider the following example with the scalar focus particle *walaw* which functions as a genuine NPI in the language:

(30) a.*(ma)-ħall **walaw** ṭālib s-suʔāl.
NEG-answered even student.3S the-question
'Even (one) student did not answer the question.'

b. **walaw** ṭālib *(ma)-ħall s-suʔāl.
even student NEG-answered.3S the-question
'Even (one) student did not answer the question.'

This contrast in the licensing of NCIs and NPIs in preverbal position constitutes a real problem for Laka's analysis. If both NCIs and genuine NPIs are NPIs, and if NCIs can be licensed by an abstract negative operator in ΣP, then the same option should be available for genuine NPIs, contrary to fact. This contrast in the licensing of NCIs and genuine NPIs in preverbal position raises the question why preverbal NCIs can be licensed by an abstract negative operator whereas preverbal genuine NPIs cannot. The same contrast in the distribution of NCIs and NPIs in Spanish has been reported in the literature (Penka 2007, 2011).

Third, Laka's analysis does not explain the different locality restrictions on the licensing of NPIs and NCIs. In particular, this analysis does not capture the fact that while NPIs can be licensed by superordinate negation (i.e. negation in a higher clause) as illustrated in (31) below, long distance licensing is not possible for NCIs as illustrated in (32) below.

(31) Maryam *(ma)-gālat ʔənn-ha ħallat **walaw** suʔāl.
Mary NEG-said.3SF that-her answered.3SF even question
'Mary did not say that she answered any question.'

(32) *Maryam ma-gālat ʔənn-ha ʃtarat **wala** ktāb.
Mary NEG-said.3SF that-her bought.3SF NCI-DET book
'Mary did not say that she bought any book.'

This contrast remains a puzzle under Laka's analysis: if both NCIs and NPIs belong to the same category, they should be subject to the same licensing conditions. In both (31) and (32), the NPI

walaw and the NCI *wala* co-occur with a licensing overt negative operator in a higher clause and thus they should be both grammatical under Laka's analysis, which is not the case. The same contrast has been reported about NCIs in Spanish and genuine NPIs such as *any* in English (Penka 2007, 2011).

Fourth, Laka's analysis makes no claims as to the ability of NCIs to appear as fragment answers with no overt negative marker to license them. Here, one can make the assumption that, on par with preverbal non-strict NCIs, NCIs in fragment answers are licensed by an abstract negative operator as evident from the negative meaning associated with these items in the context of a fragment answer. However, such an analysis faces empirical problems. In particular, assuming that NCIs are grammatical in fragment answers by virtue of being licensed by an abstract negative operator predicts that genuine NPIs as well should be grammatical in the same context, which is not the case. While NCIs in JA are grammatical in fragment answers, genuine NPIs are not as shown in the following examples:

(33) A: mīn d͡ʒa?
who came.3S
'Who came?'

B: **wala** wāħad.
NCI-DET one
'No one.'

B': ***walaw** wāħad.
even one
'Anyone.'

It is not clear why NCIs like *wala* in (33B) can provide a fragment answer; whereas genuine NPIs like *walaw* in (33B') cannot do so. If the NCI in (33B) is assumed to be an NPI that is

licensed by an abstract negative operator, the same option should also be available for the genuine NPI in (33B').

Fifth, Laka's analysis predicts that NCIs should be grammatical in all contexts that license NPIs. This prediction is not borne out. We have previously seen that NPIs in JA are grammatical in a number of apparently unrelated contexts. These contexts include overt negation, *without*-clauses, *before*-clauses, interrogatives, and the protasis of conditionals, among others. NCIs in JA, one the other hand, have been shown to be grammatical only in a subset of these contexts, namely overt negation, *without*-clauses, and *before*-clauses. The same contrast has been reported about NCIs and NPIs in other NC-languages such as Spanish: NCIs in Spanish are licensed in only a subset of the contexts that are known to license NPIs (Penka 2007, 2011).

5.3.1.2 The Relative Strength of Negation Analysis

Another approach that equates NCIs with NPIs is that proposed by van der Wouden (1997) and Zwarts (1996, 1998). Their approach is basically an elaboration of the Downward Entailment Approach of Ladusaw (1980, 1982, 1983) presented in the previous chapter.

Van der Wouden and Zwarts suggest a hierarchy of negative contexts with downward monotonicity being the weakest on the hierarchy, and anti-morphism being the strongest on the hierarchy as shown in the following figure:

Downward entailing
$(X \subseteq Y) \rightarrow f(Y) \subseteq f(X))$
e.g. few, rarely
(Weak NPIs)

Anti-multiplicative
$f(X \cap Y) \leftrightarrow f(X) \cup f(Y)$
e.g. not every, not always
(----------)

Anti-additive
$f(X \cup Y) \leftrightarrow f(X) \cap f(Y)$
e.g. nobody, no man
(Strong NPIs)

Anti-morphic
$f(X \cap Y) \leftrightarrow f(X) \cup f(Y)$
and
$f(X \cup Y) \leftrightarrow f(X) \cap f(Y)$
e.g. Not
(Super-strong NPIs)

Figure1: A Hierarchy of negative contexts: (adapted from Penka 2011: 24)

The relative strength of negation of each of the negative contexts presented in Figure 1 above is defined by the kind of entailment it allows. These contexts stand in a subset/superset relation: anti-morphic contexts are a subset of anti-multiplicative contexts; anti-additive contexts, anti-multiplicative contexts, and anti-additive contexts are a subset of downward entailing contexts (anti-multiplicative contexts and anti-additive contexts are assumed to express the same strength of negation).

Van der Wouden (1997) and Zwarts (1998) explain the distributional differences between NPIs by suggesting three classes of NPIs depending on the kind of negative contexts each class can appear in. These three classes of NPIs include super-strong NPIs, strong NPIs, and weak NPIs. Super-strong NPIs are those that are licensed in anti-morphic contexts with the exclusion of anti-additive contexts and downward entailing contexts (anti-multiplicative contexts seem not to license any of the three classes of NPIs discussed here). Strong NPIs are those that are

licensed in anti-additive contexts, but not in downward entailing contexts. Weak NPIs are those that are licensed in downward entailing contexts.

The analysis proposed by van der Wouden and Zwarts suggests that NCIs are strong NPIs. For example, we have seen in chapter three that, in contrast to genuine NPIs in JA which are licensed in downward entailing contexts, NCIs in JA are only licensed by overt negation, *without*-clauses, and *before*-clauses which are all anti-additive contexts according to van der Wouden and Zwrats. Thus, while genuine NPIs in JA are weak NPIs, NCIs in JA are strong NPIs under the analysis of van der Wouden and Zwarts.

Approaching the distribution of NCIs by assuming that they are strong NPIs faces several problems. First, this analysis does not explain the fact that NCIs in fragment answers and in preverbal position (in the case of non-strict NCIs) are grammatical without an overt negative marker to license them, and that they can express negation on their own in these contexts. Van der Wouden and Zwarts do not offer a mechanism to capture the behavior of NCIs in fragment answers and in preverbal position.

Second, this analysis does not explain the locality restriction on the licensing of NCIs. If NCIs are strong NPIs that are licensed only in anti-additive contexts, it is not clear why NCIs are grammatical with clause-mate negation, but not with superordinate negation. This raises the question of whether clause-mate negation and superordinate negation have the same negative force. In fact, it has already been noticed that clause-mate negation and superordinate negation do not express the same strength of negation: while clause-mate negation is anti-morphic, superordinate negation is anti-additive (Goro 2007). However, we still expect NCIs to be grammatical with superordinate negation as this is still anti-additive, contrary to fact.

Third, and most importantly, NCIs are not acceptable with all anti-additive contexts. For example, NCIs in JA are not acceptable in the protasis of conditionals and in the restriction of universal quantifiers even though these should be classified as anti-additive contexts according to van der Wouden (1997) and Zwarts (1998):

(34) *iða Maryam ħallat **wala** suʔāl, raħ tənd͡ʒaħ.
if Mary answered.3SF NCI-DET question, will pass.3SF
'If Mary answers any question, she will pass.

(35) *kul ṭālib ħall **wala** suʔāl, raħ yənd͡ʒaħ.
every student answered.3S NCI-DET question will pass.3S
'Every student who answered any question will pass.'

The same facts have been reported about NCIs in other NC-languages such as Spanish: Spanish does not license NCIs in, for example, the restriction of universal quantifiers (Penka 2007, 2011).

5.3.1.3 The Binding Analysis

Progovac (1988, 1993, 1994) proposes a binding analysis that equates NCIs with NPIs. She approaches the distributional differences between NCIs and NPIs by proposing that these two sets of items are subject to different binding principles and different raising parameters. The Binding Analysis was discussed in chapter 4. There, we saw that this analysis does not extend to NPIs in JA. NPIs in JA were shown to be grammatical with clause-mate negation, superordinate negation, and a number of negative-like contexts. NPIs in JA were also shown to disobey island constraints and thus they must be licensed in situ. That NPIs in JA are licensed in situ, and that they are acceptable with clause-mate negation and superordinate negation suggests that they are not subject to any binding principle.

The Binding Analysis does not extend to NCIs in JA either. NCIs in JA were shown to be grammatical with clause-mate negation and a subset of the negative-like contexts that license

NPIs, namely *without*-clauses and *before*-clauses, but not with superordinate negation (when the NCI is in an embedding clause that is in the indicative mood). At first approximation, NCIs in JA seem to be subject to Principle A and to lack quantificational force.

This analysis of NCIs in JA faces two problems. First, this analysis does not capture the fact that NCIs in JA are acceptable in only a subset of the negative-like contexts that license genuine NPIs, namely *without*-clauses and *before*-clauses. Negative-like contexts are assumed to pattern together as NPI licensing contexts under the Binding Analysis; that is, this analysis predicts that NPIs that are acceptable in some negative-like contexts should be grammatical in all of these contexts.

Second, the Binding Analysis dose not capture the fact that NCIs in JA are not accompanied by any negative marker in contexts like fragment answers and in preverbal position in the case of non-strict NCIs, and thus they are free in their governing category. The analysis also fails to explain the negative meaning associated with NCIs in these contexts.

5.3.1.4 The (Non-)veridicality Analysis

Another approach that treats NCIs as a special kind of NPIs is the (Non-)veridicality Approach of Giannakidou (1998, 2002, 2006). Giannakidou approaches the distributional differences between NCIs and NPIs by proposing different conditions on their licensing in terms of (non-)veridicality. NPIs are assumed to be existential quantifiers that need to be in the c-command domain of a non-veridical operator at LF; whereas NCIs are assumed to be universal quantifiers that need to be in an anti-veridical context. The (Non-)veridicality Approach was discussed in chapter 4. There, I showed that this approach correctly predicts the distribution of the set of NSIs that function as NPIs in JA.

This subsection focuses on the adequacy of the (Non-)veridicality Approach for explaining the distribution of the set of NSIs that function as NCIs rather than NPIs in JA. I will show that this approach falls short of accounting for the facts surrounding NCIs in JA.

First, JA poses serious challenges with regard to the diagnostics that Giannakidou uses to ensure the nature of NCIs as universal quantifiers as opposed to the existential quantifier nature of NPIs. The diagnostics she provides are mainly based on data from Greek. These diagnostics include the empathic nature of NCIs as opposed to the non-emphatic nature of NPIs (36), and the compatibility of only NCIs with modification by adverbs like *almost* (37).

(36) O papus dhen idhe **KANENA/kanenan** apo ta egonia tu.
the grandpa not saw.3SG any from the grandchildren his
'Grandpa did not see any of his grandchildren.'

(Greek: Giannakidou 1998: 57)

(37) Dhen idha sxedhon **KANENAN/*kanenan**.
not saw.1SG almost anybody
'I saw almost nobody.

(Greek: Giannakidou 1998: 64)

Emphatic accent and compatibility with modification by *almost* are well-known tests for distinguishing universal quantifiers taking wide scope readings from existential quantifiers taking narrow scope readings (Bu̎ring 1997; Dahl 1970; Horn 1972).

This analysis predicts that only NCIs in JA can bear emphatic accent and can be modified by adverbs like *almost*. This prediction is not borne out. Both NCIs and NPIs in JA can bear emphatic accent and can by modified by adverbs like *almost* as shown in (37) and (38) respectively below:[10]

[10] Larger font is used to indicate that NCIs and NPIs bear emphatic stress in the examples under (38).

(38) a. Maryam *(ma)-ħallat **wala** suʔāl.
Mary NEG-answered.3SF NCI-DET question
'Mary did not answer any question.'

b. Maryam *(ma)-ħallat **ʔayy** suʔāl.
Mary NEG-answered.3SF which question
'Mary did not answer any question.'

(39) a. Maryam *(ma)-ħallat taqrīban **wala** suʔāl.
Mary NEG-answered.3SF almost NCI-DET question
'Mary did not answer almost any question.'

b. Maryam *(ma)-ħallat taqrīban **ʔayy** suʔāl.
Mary NEG-answered.3SF almost which question
'Mary did not answer almost any question.'

These examples show that both the NPI *ʔayy* and the NCI *wala* can bear emphatic stress and can be modified be adverbs like *almost*.

Second, the analysis of NCIs as universal quantifiers and of NPIs as existential quantifiers also makes wrong predictions about the distribution of logical elements that are neither NCIs nor NPIs. We have seen that only NCIs can be used to provide fragment answers. Thus, the analysis of NCIs as universal quantifiers and of NPIs as existential quantifiers predicts that only logical elements that are universal quantifiers should be grammatical in fragment answers. This prediction is not borne out. Both universal quantifiers and existential quantifiers in JA can provide fragment answers as shown in the following examples (cf. Zeijlstra 2004):

(40) A: mīn ʃift fi-l-ħaflih?
who saw.3S in-the-party
'Who did you see in the party?'

B: **kul ṭ-ṭullāb**.
all the-students
'All of the students.'

B': **baʕəð ṭ-ṭullāb.**
some the-students
'Some of the students.'

Third, Giannakidou's analysis of NCIs in fragment answers does not extend to JA. Giannakidou argues that the negative meaning associated with NCIs in fragment answers is not a property of NCIs themselves, but rather a property of a negative marker that has undergone deletion under ellipsis. Giannakidou adopts Merchant's (2004) movement-based analysis of fragments which claims that fragments move to a left-peripheral position of the clause (namely, Spec, FP) followed by PF deletion of the constituent out of which they have moved. The movement-based analysis of fragments assigns the fragment answer in (41B) the structure in (42):

(41) A: btiʃrab gahwah?
drink.2SM coffee
'Do you drink coffee?'

B: **bilmarrah**.
NCI-time
'Never.'

(42) [$_{FP}$ **bilmarrah**$_i$ [$_{IP}$ ~~ma-baʃrab gahwah t$_i$~~]]
NCI-time NEG-drink.1S coffee

The structure in (42) shows that the negative force associated with the fragment answer in (41B) is not part of the meaning of the NCI *bilmarrah*, but is rather expressed by the negative marker *ma-* that is part of a constituent that has undergone deletion under ellipsis.

Giannakidou further argues that the movement-based analysis of fragments explains the observation that only NCIs in Greek can provide fragment answers whereas NPIs cannot do so.

According to Giannakidou, NPIs in Greek cannot provide fragment answers because, in contrast to NCIs, they cannot be topicalized and thus they can never appear in a preverbal left-peripheral position:

(43) **KANENAN/*kanenan** dhen idha.
any not saw.1SG
'I saw nobody.'

(Greek: Giannakidou 1998: 160-161)

This analysis of fragment answers predicts that any element that can be topicalized and appear in a preverbal left-peripheral position can provide fragment answers. This prediction is not borne out. We have seen in Chapter 4 that, like NCIs, NPIs in JA can be topicalized and appear in a preverbal position (44); however, they still cannot provide fragment answers in the language (45).

(44) **ʕumur** Maryam *(ma)-rāḥat ʕala ʔamrīka.
ever Mary NEG-went.3SF to America
'Mary has not ever gone to America.'

(45) A: Maryam rāḥat ʕala ʔamrīka?
Mary went.3SF to America
'Has Mary gone to America?'

B: ***ʕumur**-ha.
ever-her
'Ever.'

Giannakidou's analysis of NCIs and NPIs in fragment answers predicts the example in (45B) to be grammatical, contrary to fact. Under her analysis, NCIs and NPIs are considered to form a natural class and thus they are expected to be grammatical in fragment answers as far as they meet the requirement that they can appear in a preverbal left-peripheral position. However, the

NPI *ʕumur*, for example, can appear in a preverbal left-peripheral position as shown in (44) above, but still it fails to provide a fragment answer as shown in (45B) above. The same facts have been reported about NPI verbs in Dutch: NPI verbs in Dutch cannot be used to provide a fragment answer even though they can appear in a preverbal left-peripheral position in the language (Zeijlstra 2004).

One last problem with the (Non-)veridicality Approach of NC is that it, as Giannakidou herself acknowledges, works only for strict NC, but not for non-strict NC. For example, the (Non-)veridicality Approach does not offer any mechanism to capture the fact that non-strict NCIs must not be accompanied with a negative marker when they appear in a preverbal position. The (Non-)veridicality Approach faces two problems here. First, non-strict NCIs in preverbal position are not combined with a negative marker and thus they seem to be unlicensed as they do not occur with any anti-veridical operator in this context. Second, the negative force associated with non-strict NCIs in preverbal position remains a puzzle: these NCIs do not co-occur with any overt negative marker and they can express negation on their own.

Putting things together, the ideas presented in this subsection suggest that NCIs are not inherently negative, but are rather non-negative NPIs. The basic proposals of each of the analyses presented in this subsection are summarized in the following table:

Table 1: The Non-negative NPI Approach to NC: analyses and basic proposals

	Analysis	Proposal
1	The ΣP Analysis (Laka 1990)	NCIs can occur preverbally and are thus self-licensing as opposed to genuine NPIs that can only occur post-verbally.
2	The Relative Strength of Negation Analysis (van der Wouden 1997; Zwarts 1997, 1998)	NCIs are strong NPIs that need to be licensed by an anti-additive operator as opposed to weak NPIs that are licensed by downward entailing operators of which anti-additive operators are a subset.
3	The Binding Analysis (Progovac 1988, 1993, 1994)	NCIs are NPIs that are subject to binding principles and raising parameters that are different from those available for genuine NPIs
4	The (Non-)veridicality Analysis (Giannakidou 1998, 2000, 2006)	NCIs are universal quantifiers that need to appear in an anti-veridical context as opposed to genuine NPIs which are existential quantifiers that need to be in the c-command domain of a non-veridical operator at LF.

We have seen that the assumption that NCIs are non-negative NPIs faces two major problems. First, NCIs and NPIs exhibit some distributional differences that need to be explained in any adequate theory of NC that equates these two sets of items. Second, NCIs seem to express negation on their own in contexts like fragment answers and in preverbal position in the case of non-strict NCIs and thus they seem to be inherently negative. All of the theories presented in this subsection have been shown to fall short of providing an adequate solution to either of these problems. The following subsection presents ideas that take the opposite assumption and suggest that NCIs are negative quantifiers rather than non-negative NPIs.

5.3.2 The Negative Quantifier Approach

The studies discussed in this subsection argue that NCIs are inherently negative. These accounts suggest that NCIs should be treated as negative quantifiers rather than non-negative NPIs. The

challenge here is to explain why NCIs do not always introduce negation in the semantics, for instance when they are combined with a sentential negative marker.

Three different analyses have been proposed where NCIs are considered to be negative quantifiers. In 5.3.2.1, I discuss the Negative Absorption and Factorization Analysis of Zanuttini (1991), Haegeman and Zanuttini (1991, 1996), and Haegeman (1995). In 5.3.2.2, I discuss the Resumption of Negative Quantifiers Analysis of de Swart and Sag (2002). In 5.3.2.3, I address the Feature-Copying Analysis of Watanabe (2004).

5.3.2.1 The Negative Absorption and Factorization Analysis

Zanuttini (1991), Haegeman and Zanuttini (1991, 1996), and Haegeman (1995) assume that NCIs are universal quantifiers and that they are inherently negative. They further assume that NCIs need to be in a Spec-head configuration with an X^0[NEG]. The requirement that NCIs need to be in a Spec-head configuration with an X^0[NEG] is imposed by a principle of well-formedness known as the NEG-Criterion:

(46) The NEG-Criterion:

a. A NEG-operator must be in a Spec-head configuration with an X^0 [NEG];
b. An X^0 [NEG] must be in a Spec-head configuration with a NEG-operator.

(Haegeman 1995:134)

Where the following definitions obtain:

(47) a. NEG-operator: a negative phrase in a scope position;
b. Scope Position: left-peripheral A'-position (an XP-adjoined position or a specifier position.

The NEG-Criterion is analoguous to the WH-Criterion of May (1985) and Rizzi (1996) that was proposed to capture the distribution of wh-expressions:

(48) WH-Criterion:

a. A WH-operator must be in Spec-head configuration with X^0 [WH];
b. An X^o [WH] must be in Spec-head configuration with a WH-operator

(Rizzi 1996)

The WH-Criterion assumes that wh-expressions bear a [+WH] feature that needs to be checked under a Spec-head configuration with an appropriate head in CP. Wh-expressions are assumed to check their [+WH] feature by moving to Spec, CP either before or after Spell-Out.

The main motivation behind the NEG-Criterion is the observation that the expression of wh-questions and the expression of negation exhibit a number of semantic and syntactic similarities and thus they should be regulated by similar principles. Haegeman (1995) outlines some parallelisms between wh-constructions and negative constructions that favor a unified account of both constructions. First, both wh-questions and negation can license NPIs:

(49) a. I did not see anyone.

b. Did you see anyone?

(English: Haegeman 1995: 70)

Second, both wh-questions and negation trigger subject-auxiliary inversion:

(50) a. What did you see?

b. Never in my life will I do that again.

(English: Haegeman 1995: 71)

Third, both wh-questions and negation introduce inner islands effects where an intervening operator in an A-bar position prohibits movement out of an A-bar position:

(51) a. 1. [Bill is here]$_i$ as they know t_i.

2. *[Bill is here]$_i$ as they don't know t_i.

b. 1. Why$_i$ did you think that they will fire Bill t_i?

2. *Why$_i$ did you wonder whether they will fire Bill t_i?

(English: Haegeman 1995: 78)

Fourth, both multiple wh-expressions and multiple negative expressions have similar readings: multiple wh-expressions in the same sentence are interpreted as an instance of one wh-expression in the semantics (52a), and multiple negative expressions are interpreted as one instance of negation in the semantics (52b):

(52) a. **Qui** disait **quoi**?
who said what
For which x, y [x: a person; y: a thing] [x said y]

b. **Personne** ne disait **rien**.
NCI-person not said NCI-thing
'No one said anything'
No x, y [x: a person; y: a thing] [x said y]

(French: Haegeman 1995: 78)

Different proposals have been suggested with regard to the level at which the NEG-Criterion is assumed to apply. Zanuttini (1991) and Haegeman and Zanuttini (1991, 1996) argue for a parameterization of the NEG-Criterion: while it needs to apply at surface structure in some languages, it applies at LF in others. Haegeman (1995), on the other hand, argues that the NEG-Criterion always takes place at LF and that it can apply under a syntactic chain headed by an abstract operator in Spec, NegP.

The NEG-Criterion explains the syntactic licensing of NCIs: NCIs need to be in a Spec-head configuration with an X^0[NEG]. However, the NEG-Criterion, as it stands so far, does not

explain the failure of NCIs to express negation in NC-constructions: NCIs are assumed to bear an interpretable negative feature and thus the combination of multiple NCIs and the combination of an NCI and a negative marker should express a meaning with double negation. Further mechanisms are postulated to account for NC.

For the co-occurrence of multiple NCIs (i.e. Negative Spread), a rule of negative absorption is proposed. This rule is again an analogy of the wh-absorption rule of Higginbotham and May (1981) and May (1989) which is assumed to turn two or more unary wh-quantifiers that are in the same projection into one *n*-ary wh-quantifier binding *n* variables. In a similar fashion, the negative absorption rule is supposed to turn two or more unary negative quantifiers that are in the same projection into one *n*-ary negative quantifier binding two or more variables:

(53) Neg-absorption:

$[\forall x \neg][\forall y \neg][\forall z \neg] = [\forall x, y(, z)]\neg$

(Haegeman and Zanuttini 1996: 139)

For the co-occurrence of an NCI and a negative marker (i.e. Negative Doubling), a rule of negative factorization is stipulated whereby the negative meaning associated with a negative marker and the negative meaning associated with an NCI melt together contributing one instance of negation to the semantics:

(54) Neg-factorization:

$[\forall x \neg][\neg] = [\forall x]\neg$

(Haegeman and Zanuttini 1996: 139)

The NEG-Criterion approach faces different problems. First, the parallelisms that this approach assumes to exist between negation and wh-expressions have received a lot of criticism in the literature. For example, Giannakidou (1998) shows that not all languages that exhibit

inversion in wh-questions also exhibit inversion with negative expressions. She further argues that there are languages in which inversion is not required even with wh-questions. In fact, JA is one such language: a wh-question in JA does not require a verb to be inverted with a subject:

(55) a. ʃū Maryam ʃtarat?
what Mary bought.3SF
'What did Mary buy?'

b. ʃū ʃtarat Maryam?
what bought.3SF Mary
'What did Mary buy?'

Furthermore, Zeijlstra (2004) points out that the ability of both wh-questions and negative expressions to license NPIs and to introduce inner islands effects is not due to any property that is peculiar to these constructions. Rather, he argues that wh-questions and negative expressions can license NPIs and can introduce inner islands effects due to their status as non-veridical operators, a property which they share with many other constructions. Zeijlstra (2004) also points out that wh-expressions and negative expressions exhibit some differences that argue against a unified account of them. For example, while negative expressions are clause bound, wh-expressions are not: a wh-expression in a lower clause can co-occur with another wh-expression in a higher clause; whereas a NCI in a lower clause cannot co-occur with another NCI in a higher clause (given that the lower clause is in the indicative mood).

Second, the NEG-Criterion fails to capture the requirement that a negative marker must be present with post-verbal non-strict NCIs, but has to be absent with preverbal non-strict NCIs. For languages like Italian which exhibit only non-strict NCIs, Zanuttini (1991) argues that these languages require the presence of a negative marker with post-verbal NCIs because, in these languages, the NegP is located above TP, and that TP constitutes a barrier for LF-movement of

NCIs. She further assumes that the barrierhood of TP can be circumvented if it is L-marked by having a phonologically overt negative marker in Neg^0. Thus, the ability of post-verbal NCIs in non-strict NC-languages to move to Spec, NegP, as required by the NEG-Criterion, depends on the presence of an overt negative marker in Neg^0. Zunuttini, thus, assumes a parameterization of the hierarchal position of NegP and TP: while NegP is located above TP in non-strict NC-languages; it is located below TP in strict NC-languages. This parameterization of the hierarchal position of NegP and TP, which is mainly based on whether a given language exhibits either non-strict NC or strict NC, breaks down in cases of languages like JA that exhibit both varieties of NC at the same time (cf. Penka 2007, 2011).

Third, the NEG-criterion does not explain why preverbal non-strict NCIs cannot co-occur with overt negation. There is nothing in the analysis of Zanuttini and Haegeman that prevents preverbal non-strict NCIs from being in Spec-head agreement with an overt negative marker in the head of NegP, and thus a sentence with a preverbal non-strict NCI and an overt negative marker should be grammatical under a concordant reading, contrary to fact (Zeijlstra 2004, Giannakidou 1998, 2000, 2006, Penka 2007, 2011).

Fourth, the analysis of NCIs as universal quantifiers is not without problems. Zanuttini (1991) basically relies on the compatibility of both universal quantifiers and NCIs with adverbs like *almost* in his analysis of NCIs as universal quantifiers rather than existential quantifiers or non-quantificational indefinites. In fact, the validity of the *almost*-test as a diagnosis of universal quantifiers has received a lot of criticism in the literature (Partee 1986, Błaszczak 2001, Penka 2011).

Finally, NCIs are licensed in contexts that do not involve an overt negative marker. For instance, NCIs are acceptable in the complement clauses of prepositions like *without* and *before* as shown in the following examples:

(56) a. Maryam ṭalaʕat bidūn ma təħki **wala** kilmih.
Mary left.3SF without COMP. say.3SF NCI-DET word
'Mary left without saying any word.'

b. Maryam ṭalaʕat gabil ma tʤāwib **wala** suʔāl.
Mary left.3SF before COMP. answer.3SF NCI-DET question
'Mary left before answering any question.'

These sentences constitute a problem for the NEG-Criterion because they do not involve an overt negative marker with which NCIs can enter into a Spec-head agreement, and because NCIs seem to behave like existential quantifiers rather than universal quantifiers in these contexts. Similar facts have been reported about other NC-languages such as Spanish and Italian (Zeijlstra 2004; Penka 2007, 2011). We will see later in this chapter that an analysis of prepositions such as *without* and *before* as expressions that are not only intuitively negative but also formally negative is possible.

5.3.2.2 The Resumption of Negative Quantifiers Analysis

Another approach that treats NCIs as negative quantifiers is that of de Swart and Sag (2002). Their main purpose was to propose a proper formalism for the rules of negative absorption and factorization of Haegeman and Zanuttini whereby an NCI is assumed to lose its negative meaning. They cast their approach within a polyadic quantifier framework and argue that NC is a manifestation of a process of quantifier resumption. De Swart and Sag focus on the distribution of NCIs in Romance, mainly French, but claim that their analysis is supposed to work cross-

linguistically. As an example, let us consider their analysis for a sentence like (57) below from French:

(57) **Personne** n'aime **personne**.
NCI-person loves NCI-person
a. 'No one loves anyone.'
b. 'Everyone loves someone.'

(French: De Swart and Sag 2002: 376)

French sentences with two NCIs like (57) above are ambiguous between a concordant reading and a double negation reading as illustrated in the English translations. The two readings are assumed to be the result of two different strategies of quantification: quantifier resumption and quantifier iteration. The concordant reading is assumed to be the result of quantifier resumption whereby a sequence of two unary negative quantifiers yields an interpretation with one polyadic negative quantifier. The double negation reading, on the other hand, is assumed to be the result of quantifier iteration whereby a sequence of two unary negative quantifiers retain their negative force yielding an interpretation with double negation. Resumptive quantification is considered to be optional, thus accounting for the ambiguity of sentences like (57) above.

One piece of evidence that de Swart and Sag use in order to motivate the analysis of NC as the result of resumptive polyadic quantification is the compatibility of NC-constructions with the standard diagnostics of resumptive readings such as their ability to be modified by *sauf* 'except' clauses as shown in the following example:

(58) **Personne** n'a parlé a **personne**, sauf Marie a son frère.
NCI-body has talked to NCI-body, except Marie to her brother
'Nobody talked to anybody, except Mary to her brother'

(French: de Swart and Sag 2002: 388)

De Swart and Sag extend their analysis to capture NC-constrictions that involve a negative marker (i.e. Negative Doubling constructions), and NC-constructions that involve prepositions like *without*. They argue that negative markers and prepositions like *without* are zero quantifiers binding no variables. They further argue that negative markers and prepositions like *without* share with NCIs the property of being anti-additive operators. Consequently, they redefine NC as resumption of a sequence of anti-additive quantifiers, thus allowing negative markers and prepositions like *without* to participate in it.

The analysis of NC as resumption of negative quantifiers is flawed for different reasons. First, it falls short of accounting for the fact that the combination of multiple NCIs and the combination of a NCI and a negative marker can only receive a concordant reading, but never a double negation reading in JA:

(59) **wala** ṭālib ħall **wala** suʔāl.
NCI-DET student answered.3S NCI-DET question
'No student answered any question.'
*'No student answered no question.'

(60) Maryam *(**ma**)-ħakat **wala** kilmih.
Mary NEG-said.3SF NCI-DET word
'Mary did not say any word.'
*'Mary did not say no word.'

Under the analysis of de Swart and Sag, resumption of negative quantifiers is optional and thus both readings of a negative quantifier (the negative reading and the non-negative reading) should always be available in all languages. This prediction is not borne out. For example, the NCIs in (59) and (60) above can only have a concordant reading, but never a double negation reading. In fact, it has been shown that, unlike NCIs in French, NCIs in the majority of NC-languages can only have a concordant reading in NC-constructions, but never a double negation reading (Penka

2007, 2011). It has also been observed that genuine negative quantifiers in double negation languages such as Standard English, German, and Dutch only yield a double negation reading when they are accompanied by a negative marker, but never a concordant reading (Penka 2007, 2011).

Second, the analysis of de Swart and Sag does not explain the contrast between preverbal strict NCIs and preverbal non-strict NCIs in JA. In particular, it is not clear under this analysis why the combination of a preverbal strict NCI and a negative marker can only have a concordant reading (61); whereas a combination of a preverbal non-strict NCI and a negative marker can only have a double negation reading (62).

(61) **bilmarrah** ma-btōkil tuffāħ.
NCI-time NEG-eat.3SF apples
'She never eats apples.'
*'She does not never eat apples.'

(62) **wala** wāħad ma-d͡ʒa.
NCI-DET one NEG-came.3S
'No one did not come.'
*'No one came.'

If NC is really the result of resumption of negative quantifiers, it is then not clear why it is available for a sequence of a preverbal strict NCI and a negative marker such as the one in (61), but not for a sequence of a preverbal non-strict NCI and a negative marker such as the one in (62).

Third, the analysis of NC as resumption of negative quantifiers falls short of accounting for the fact that NCIs in NC-languages such as French and JA are sensitive to negation; whereas genuine negative quantifiers in double negation languages such as Standard English, German, and Dutch are not. More precisely, if NCIs are really negative quantifiers, it is not clear then why

they most often need to co-occur with a licensing negative marker in contrast to genuine negative quantifiers in double negation languages. In fact, this is not a problem for only the analysis of NC presented here, but also a problem for all analyses that equate NCIs with negative quantifiers (Zeijlstra 2004).

5.3.2.3 The Feature-Copying Analysis

Another approach that takes NCIs to be negative quantifiers is that proposed by Watanabe (2004). Watanabe proposes an account of NC within the framework of the general theory of feature checking. He argues that NCIs enter into an Agree relation with negative markers, with NCIs acting as Goals and negative markers acting as Probes. However, both NCIs and negative markers are assumed to have interpretable negative features under Watanabe's analysis, thus not meeting the conditions under which an Agree relation is supposed to apply: Agree can only apply when a given Goal is active by virtue of having uninterpretable features as proposed by Chomsky (2000). For this, Watanabe argues that, in addition to the interpretable negative feature, NCIs have an uninterpretable focus feature that makes them active Goals.

Furthermore, Watanabe adopts the theory of feature-copying of Chomsky (1995, 1998), whereby feature-checking involves copying of features onto the Probe. According to feature-copying, an Agree relation between a feature H, acting as a Probe, and a feature F, acting as a Goal (63), results in a structure with feature F being copied onto H (64a), rather than a structure where no copying of F onto H takes place (64b).

(63) H [… [$_{XP}$ … F …] …]

(64) a. [(XP) H + F [… [$_{XP}$ … F …] …]]

b. [(XP) H [… [$_{XP}$ … F …] …]]

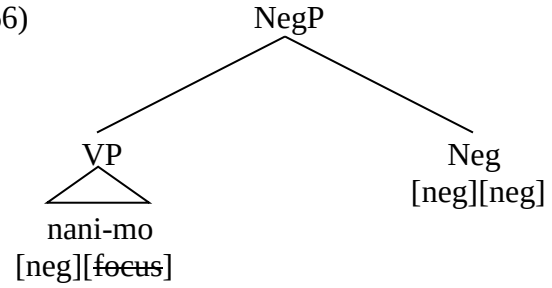
(Watanabe 2004: 581)

Although Chomsky abandons the theory of feature-copying in later work (Chomsky 2000, 2001, 2005), Watanabe shows that it can still account for NC. For example, for sentences like (65) from Japanese, Watanabe argues that the negative marker *nak*, acting as a Probe, establishes an Agree relation with the NCI *nani-mo*, acting as a Goal, thus resulting in a structure where the uninterpretable focus feature of the NCI is checked and eliminated, and where the interpretable negative feature of the NCI is copied onto the negative marker as shown in (66).

(65) John-wa **nani-mo** tabe-**nak**-atta.
John-TOP what-MO eat-NEG-PAST
'John didn't eat anything.'

(Japanese: Watanabe 2004: 579)

(66)



(Watanabe 2004: 581)

The structure in (66) shows that feature-copying results in the negative marker having two interpretable negative features: that of the negative marker itself, and that copied onto it from the NCI. Watanabe argues that the two interpretable negative features of the negative marker in a

structure like (66) are contained in the same projection with no hierarchal order. These two negative features are assumed to cancel each other out, thus resulting in a semantically vacuous negative marker. Accordingly, Watanabe assumes that it is the negative marker rather than the NCI that fails to express negation in NC-constructions.

Watanabe approaches the distinction between strict and non-strict NC-languages by suggesting a parameterization of the Agree (i.e. feature-checking) operation of NCIs: NCIs in strict NC-languages such as Greek and Japanese obligatorily undergo feature-checking; whereas NCIs in non-strict NC-languages such as West Flemish optionally undergo feature-checking. He motivates this analysis by linking it to the differences between the morphological makeup of NCIs in strict NC-languages and non-strict NC-languages. NCIs in strict NC-languages always display focus morphology. For example, NCIs in Japanese always appear with the scalar focus particle *mo* 'even, also', and NCIs in Greek are always uttered with emphatic stress. NCIs in non-strict NC-languages, on the other hand, do not display any focus morphology. For example, NCIs in West Flemish display neither a focus particle nor emphatic stress.

Watanabe's analysis has both conceptual and empirical problems. First, this analysis diverges from one of the basic conceptions of the feature-checking theory where an Agree operation must involve checking and elimination of uninterpretable features on a Probe against matching interpretable features on a Goal. Under Watanabe's analysis, both a negative marker, acting as a Probe, and an NCI, acting as a Goal, are assumed to enter into an Agree operation although both the negative marker and the NCI bear only matching interpretable negative features. Furthermore, it is not clear why an uninterpretable focus feature can be checked and eliminated by a negative marker bearing only an interpretable negative feature.

Second, Watanabe's analysis does not extend to Negative Doubling and Spread constructions (i.e. constructions where multiple NCIs fail to contribute negation to the interpretation when they co-occur with a sentential negative marker). Consider the following sentence from JA:

(67) Maryam *(**ma**)-katabat **wala** baħəθ **lahassa**.
Mary NEG-wrote.3SF NCI-DET paper NCI-time
'Mary has not written any paper yet.'

Applying Watanabe's system to sentences like (67) above, one would expect both the NCI *wala* and the NCI *lahassa* to enter into an Agree relation with the negative marker *ma-*. The Agree relation then results in a negative marker with three interpretable negative features: that of the negative marker itself, that copied onto it from the NCI *wala*, and that copied onto it from the NCI *lahassa*. Watanabe addresses only cases in which two internally unordered interpretable negative features on a negative marker can cancel each other out resulting in a negative marker with no semantic content. It is not clear what happens when the number of negative features on the negative marker exceeds two. In such cases, the negative marker would remain semantically negative unless extra machinery is postulated. Furthermore, even if such extra machinery does really exist, a problem still arises with the negative features of the NCIs. NCIs are assumed to retain their interpretable negative features after feature-copying, thus predicting a sentence with two NCIs like (67) above to have a double negation reading, which is not the case.

Third, feature-copying is assumed to account for Negative Doubling constructions (i.e. constructions where an NCI fails to contribute negation to the interpretation when it co-occurs with a sentential negative marker); however, it does not extend to Negative Spread constructions (i.e. constructions where an NCI fails to contribute negation to the interpretation when it co-

occurs with another NCI). Watanabe argues that Negative Doubling and Negative Spread are subject to different principles and thus they should be treated differently.

Finally, JA poses a serious challenge for the parameterization of the Agree (i.e. feature-checking) operation of NCIs. An examination of the morphological makeup of NCIs in JA contradicts what this parameterization predicts for NCIs in the language. JA has been shown to exhibit three categories of NCIs. These include the negative scalar focus particle *wala*, the *never*-words, and the *not-yet*-words. All these NCIs in JA are always uttered with emphatic stress. Thus, the parameterization of the Agree operation of NCIs predicts JA to exhibit only strict NC: NCIs in JA must undergo feature-checking as their morphological makeup shows that they always display emphatic stress. This prediction is not borne out. JA exhibits both strict and non-strict NC: while the negative scalar focus particle *wala* functions as a non-strict NCI, the *never*-words and the *not-yet*-words function as strict NCIs.

In fact, a closer examination of the morphological makeup of NCIs in JA shows that it is the NCI *wala* rather than the *never*-words and the *not-yet*-words that should function as a strict NCI according to Watanabe's system. In addition to bearing emphatic stress, the NCI *wala* is identical to the additive focus particle meaning 'nor, not even', and is also almost identical to the scalar focus particle *walaw* 'even, at least' that functions as an NPI in the language. Thus, in comparison to the *never*-words and the *not-yet*-words which display only emphatic stress, the NCI *wala* seems to display both a focus morpheme and emphatic stress making it more eligible for functioning as a strict NCI than the *never*-words and the *not-yet*-words under Watanabe's system, which is not the case.

In sum, the accounts presented in this subsection propose that NCIs are inherently negative. These accounts suggest that NCIs should be treated as negative quantifiers rather than

non-negative NPIs. The basic premises of each the analyses presented in this subsection are summarized in the following Table:

Table 2: The Negative Quantifier Approach to NC: analyses and basic proposals

	Analysis	**Proposal**
1	The Negative Absorption and Factorization Analysis (Zanuttini 1991; Haegeman and Zanuttini 1991 1996; and Haegeman 1995)	NCIs are negative quantifiers that need to be in Spec-head relation with Neg^0 as required by the Neg-Criterion. NCIs lose their negative force due to Neg-factorization or Neg-absorption.
2	The Resumption of Negative Quantifiers Analysis (de swart and Sag 2002).	NCIs are negative quantifiers that lose their negative force due to resumptive quantification
3	The Feature-Copying Analysis (Watanabe 2004)	NCIs are negative quantifiers. NCIs never lose their negative force; rather, negative markers that are accompanied by NCIs lose their negative force due to feature-copying.

We have seen that the assumption that NCIs are negative quantifiers faces two major problems. First, NCIs and negative quantifiers display some distributional differences that need to be accounted for. Second, NCIs fail to express negation on their own in different contexts, for example when they are accompanied by a negative marker. We have seen that none of the theories presented in this subsection adequately handles either of these problems.

5.3.3 The Ambiguity Approach

Herburger (2001) proposes a lexical ambiguity account of NC in non-strict NC-languages. She assumes that NCIs in non-strict NC-languages are ambiguous between a negative quantifier reading and a non-negative existential reading (i.e. an NPI reading). Consider the following sentence from Spanish:

(68) **Nadie** miraba a **nadie**.
NCI-body looked at NCI-body
'Nobody looked at anybody.'

(Spanish: Herburger 2001: 290)

Herburger accounts for the meaning of this sentence by assuming that the preverbal NCI *nadie* is a negative quantifier; whereas the post-verbal NCI *nadie* is an NPI.

Herburger cites as supporting evidence for the lexical ambiguity analysis of NCIs the fact that both readings of an NCI (i.e. the negative quantifier reading and the NPI reading) are not completely in complementary distribution but rather can sometimes be available in the same construction as shown in the following example:

(69) Nadie **nunca** volvió a Cuba.
NCI-person NCI-time returned to Cuba
a. 'Nobody ever returned to Cuba.'
b. 'Nobody never returned to Cuba.'

(Spanish: Hurberger 2001: 306)

This example shows that the NCI *nunca* is ambiguous between a non-negative NPI reading and a negative quantifier reading, a fact that Herburger takes to strongly suggest an ambiguity approach to NCIs.

If NCIs in Spanish are ambiguous between a non-negative NPI reading and a negative quantifier reading, then what prevents both readings from being always available? Why do preverbal NCIs in Spanish only have a negative quantifier reading, but not a non-negative NPI reading?; and why do post-verbal NCIs in Spanish only have a non-negative NPI reading, but not a negative quantifier reading?

As for the inability of preverbal NCIs in Spanish to have a non-negative NPI reading, Herburger proposes that this is because NPIs in Spanish, whether an NCI or a genuine NPI, are

excluded from this position in the language. That is to say, assuming that NCIs in Spanish are NPIs, they should pattern with other items in the language that function as genuine NPIs. Since genuine NPIs are excluded from preverbal position in Spanish, non-negative NCIs should also be excluded from this position.

As for the inability of post-verbal NCIs in Spanish to have a negative quantifier reading, Herburger argues that post-verbal NCIs can, in fact, occur with a negative quantifier reading in post-verbal position, but under very restricted conditions. Below is an example she cites from Spanish:

(70) Temen que el bebé sea autista. Se pasa el tiempo mirando a **nada**.
Fear.3PL that the baby is.SUBJ autistic. CL spends the time looking at NCI-thing
'They fear the baby is autistic. He spends his time looking at nothing.
(Spanish: Herburger 2001:302)

Hurbergur argues that the negative quantifier in sentences like (70) above does not scope over the existential quantifier that binds the event variable introduced by the verb, thus yielding an LF such as the following:

(71) $\exists e$ [AGENT (baby, *e*) & $\neg\exists$x [thing (x) & THEME (x, e) & look(*e*)]]
(Penka 2011: 44)

The sentence in (70) asserts that an event of looking takes place and that the baby is an agent on the event, but it fails to assert a theme on the event. Such sentences where not all participants of an event are asserted are very rare and can only be informative under very limited contexts.

The lexical ambiguity approach to NCIs suffers a number of problems. First, the ban that it proposes on preverbal non-strict NCIs to have a non-negative NPI reading does not work for JA. Herburger assumes that preverbal non-strict NCIs in Spanish cannot have an NPI reading

because an NPI in Spanish, whether an NCI or a genuine NPI, is not licensed in preverbal position in the language. In contrast to genuine NPIs in Spanish, genuine NPIs in JA can be licensed in preverbal position as shown in the following examples:

(72) **walaw** ṭālib *(ma)-ħall s-suʔāl.
even student NEG-answered.3S the-question
'Even (one) student did not answer the question.'

(73) **ʕumur** Maryam *(ma)-ħallat l-wād͡ʒib.
ever Mary NEG-answered.3SF the-assignment
'Mary has not ever answered the assignment.'

(74) **fils aħmar** Maryam *(ma)-ṣarafat-(uh).
cent red Mary NEG-spent.3SF-(it)
'Mary did not spend a red cent.'

These examples show that, for example, the scalar focus particle *walaw*, the temporal adverb *ʕumur*, and the idiomatic expression *fils aħmar*, which all function as genuine NPIs in JA, can, in fact, be licensed in preverbal position. However, a preverbal non-strict NCI in JA can never have a non-negative NPI reading in preverbal position regardless of whether it is accompanied by a negative marker or not:

(75) a. **wala** wāħad d͡ʒa.
NCI-DET one came.3S
'No one came.'

b. **wala** wāħad ma-d͡ʒa.
NCI-DET one NEG-came.3S
'No one did not come.'

Herburger's assumptions predict that the non-strict NCI *wala wāħad* in (75b) to express a non-negative NPI reading rather than a negative quantifier reading: the NCI *wala wāħad* in (75b)

seems to be in an appropriate NPI licensing context, and thus should be able to have a non-negative NPI reading, contrary to fact.

Second, the ambiguity approach to NCIs fails to account for the different distributional patterns of NCIs and NPIs in contexts that do not involve overt negation. We have previously seen that NPIs in JA can be licensed in a number of contexts that do not involve overt negation such as *without*-clauses, *before*-clauses, the protasis of conditionals, and the restriction of universal quantifiers, among others. In contrast, NCIs in JA, whether strict or non-strict, have been shown to be grammatical in only a subset of these contexts, namely *without*-clauses and *before*-clauses. If non-strict NCIs in JA are homophonous and thus are ambiguous between an NPI reading and a negative quantifier reading, it is not clear why they cannot have an NPI reading in all contexts that license genuine NPIs in the language.

Third, the ban that Herburger proposes on post-verbal NCIs to have a negative quantifier reading is incorrect. For example, it is not clear why post-verbal negative quantifiers in Spanish cannot scope above the event quantifier; whereas they can do so in double negation languages such as Standard English, German, and Dutch (Zeijlstra 2004; Penka 2007, 2011). Furthermore, this ban has been shown not to extend to other quantificational elements in Spanish: other post-verbal quantifiers in Spanish can scope above the event quantifier (Penka 2011).

Finally, JA poses a serious challenge with regard to the differences that Herburger proposes between strict and non-strict NC-languages. Herburger assumes that while non-strict NC-languages occupy an intermediate stage in the Jespersen Cycle where NCIs are still ambiguous between an NPI reading and a negative quantifier reading, strict NC-languages occupy a stage where NCIs are unambiguously NPIs. We have seen that JA exhibits both varieties of NC and thus it does not fit into either of the proposed stages.

It is worth pointing out at this point a recent study of NC in Arabic that assumes an ambiguity analysis of NCIs in the language. Following Herburger (2001), Hoyt (2010) proposes that non-strict *wala*-phrases in Levantine Arabic (Palestine, Jordan, Lebanon, Syria) are lexically ambiguous between a negative reading and a non-negative NPI reading. He argues that post-verbal *wala*-phrases (weak *wala*-phrases in Hoyt's terminology) in Levantine Arabic such as the one in (76a) from JA below are inherently non-negative; whereas preverbal *wala*-phrases (strong *wala*-phrases in Hoyt's terminology) in Levantine Arabic such as the one in (76b) from JA below are inherently negative.

(76) a. Maryam *(**ma**)-ħakat **wala** kilmih.
Mary NEG-said.3SF NCI-DET word
'Mary did not say any word.'

b. **wala** ṭālib ħall s-suʔāl.
NCI-DET student answered.3S the-question
'No student answered the question.'

Hoyt, further, argues that weak *wala*-phrases in Levantine Arabic are subject to a semantic licensing condition which requires them to be combined with sentential negation when their interpretation would contradict the meaning of the predicate upon which they depend.

Hoyt also provides an analysis of the *never*-words in Levantine Arabic. He argues that the *never*-words in Levantine Arabic are not inherently negative but are rather unambiguously non-negative NPIs that are subject to a morpho-syntactic licensing condition which requires them to be combined with a predicate marked with morphological negation regardless of whether they appear in a post-verbal or a preverbal position.

I argue that Hoyt's analysis suffers a number of problems. First, it inherits some of the problems with the ambiguity hypothesis first proposed by Herburger (2001). For example, it is

not clear under Hoyt's system why weak *wala*-phrases and the *never*-words are acceptable in only a subset of the contexts the license genuine NPIs in the Levantine dialect of JA as has been shown earlier. If weak *wala*-phrases and the *never*-words were NPIs in Levantine Arabic, they should be acceptable in all contexts that license genuine NPIs in the language, which is not the case.

Second, Hoyt's analysis faces problems with regard to the different negativity features it assigns to *wala*-phrases and the *never*-words in Levantine Arabic. Hoyt argues that while *wala*-phrases are ambiguous between a non-negative reading and a negative reading, the *never*-words are unambiguously non-negative. We have previously seen that both *wala*-phrases and the *never*-words can provide negative fragment answers and thus seem to be inherently negative. It is not clear under Hoyt's system where the negative meaning associated with the *never*-words in fragment answers comes from if they are really inherently non-negative.

Third, and most importantly, Hoyt's system fails to capture the licensing conditions on *wala*-phrases and the *never*-words under a unified analysis. Hoyt proposes that while weak *wala*-phrases are subject to a semantic licensing condition, the *never*-words are subject to a morpho-syntactic licensing condition. While such an analysis is not problematic in itself, a unified analysis would be preferable. We will see later in this chapter that such a unified analysis is possible.

In sum, the ambiguity approach to NC proposes that NCIs are lexically ambiguous between a non-negative NPI reading and a negative quantifier reading. This approach is meant to overcome the problems associated with approaches that assume that NCIs are solely non-negative NPIs, and approaches that assume that NCIs are solely negative quantifiers. However, we have seen that this approach inherits problems from both sides instead. The following

subsection presents another kind of approach to NC. This approach takes NCIs to be non-negative indefinites rather than non-negative NPIs or negative quantifiers.

5.3.4 The Non-negative Indefinites Approach

One last approach to NC takes NCIs to be neither non-negative NPIs nor negative quantifiers. Rather, it takes NCIs to be non-negative indefinites endowed with an uninterpretable negative feature that needs to be checked in order for the derivation not to crash as was first proposed by Zeijlstra (2004, 2008) and later elaborated on by Penka (2007, 2011). In what follows, I will present the basic premises of this approach and see if it can extend to NCIs in JA. The discussion will show that the Non-negative Indefinites Approach fares better than all previous approaches to NC. However, data from JA will show that crucial modifications need to be made in order for this approach to succeed.

Zeijlstra and Penka take NC to be a manifestation of syntactic agreement between an NCI and a semantic negation in the clause, where syntactic agreement is defined in terms of feature checking following recent assumptions within Minimalism (Chomsky 1995, 1998, 2000, 2001). NCIs are assumed to bear an uninterpretable negative feature [uNEG] that needs to be checked and eliminated against a matching interpretable negative feature [iNEG] under Agree. The feature [iNEG] is assigned to elements interpreted as negation (i.e. elements that are semantically negative). Different proposals have been suggested regarding the level at which this Agree operation is supposed to apply: while Zeijlstra (2004, 2008) argues that it applies at any level of representation, Penka (2007, 2011) argues that it applies in the surface syntax. In order to see how this syntactic agreement account of NC works, let us consider the following sentence from Italian:

(77) a. Gianni **non** telefona a **nessuno**.
Gianni NEG call to NCI-person
'Gianni does not call anybody.'

(Italian: Penka 2011: 48)

b. Gianni **non**$_{[iNEG]}$ telefona a **nessuno**$_{[\text{~~uNEG~~}]}$

C-command in the surface syntax

The NCI *nessuno* in (77a) is assumed to have no intrinsic negative force. However, it is assumed to have an [uNEG]-feature that needs to be checked against an [iNEG]-feature in order for the derivation not to crash. Since the negative marker *non*, interpreted as semantic negation and thus bearing an [iNEG]-feature, is present and c-commands the NCI, the [uNEG]-feature on *nessuno* is checked and deleted, as shown in (77b).

For constructions that involve more than one NCI, Zeijlstra and Penka adopt the mechanism of Multiple Agree (Ura 1996; Hiraiwa 2001) which assumes that one interpretable feature can enter into an Agree relation with several uninterpretable features at the same time. Thus, for a sentence like (78a) below, two [uNEG]-features, that on *niente* and that on *nessuno*, are assumed to be checked against one [iNEG]-feature, that on the negative marker *non*, as shown in (78b).

(78) a. Maria non ha detto **niente** a **nessuno**.
Maria NEG has said NCI-thing to NCI-person
'Maria has not said anything to anybody.'

(Italian: Penka 2011: 49)

b. Maria non **ha**$_{[iNEG]}$ detto **niente**$_{[\text{~~uNEG~~}]}$ a **nessuno**$_{[\text{~~uNEG~~}]}$

C-command in the surface syntax

Zeijlstra and Penka assume that the licensing negation does not always need to be overt. Rather, they assume that NCIs can be licensed by an abstract negative operator they name *Op*¬.

Op¬ is assumed to bear an [iNEG]-feature and thus it can enter an Agree relation with an NCI. *Op*¬ is invoked to account for the licensing of NCIs that are not combined with any overt negative marker such as preverbal NCIs in non-strict NC-languages as shown in the following example:

(79) a. **Nessuno** telefona a Gianni.
NCI-person call to Gianni
'Nobody calls Gianni.'

(Italian: Penka 2011: 49)

b. ***Op***¬$_{[iNEG]}$ **Nessuno**$_{[\sout{uNEG}]}$ telefona a Gianni

C-command in the surface syntax

The NCI *nessuno* in (79a) is not combined with any negative marker; however, the sentence is still grammatical and the NCI seems to have met its licensing requirement. For such sentences, the [uNEG]-feature on the NCI is assumed to be checked against the [iNEG]-feature of an abstract negative operator *Op*¬ that is inserted in a position immediately c-commanding the NCI as shown in (79b).

Zeijlstra and Penka further assume that the insertion of *Op*¬ is subject to an economy condition: an *Op*¬ is only inserted when the derivation involves an element with an [uNEG]-feature that would remain unchecked otherwise. That is to say, *Op*¬ cannot be inserted into the derivation unless its presence is marked by overt material such as the presence of an unlicensed NCI. This amounts to saying that NCIs function as markers of sentential negation: NCIs serve to mark the existence of a negative operator which might be covert in the clause just like the tense morphology on the verb which serves to mark the existence of a covert tense operator in the clause.

The economy condition on *Op*¬ is invoked to ensure that sentences like (80a) below cannot tolerate the insertion of *Op*¬ as shown in (80b) since such sentences do not involve any element that bears an [uNEG]-feature that needs to be checked and deleted in order for the derivation not to crash.

(80) a. John came.

b. **Op*¬ John came. (= John did not come.)

The assumption that preverbal non-strict NCIs are licensed by an abstract negative operator extends to other constructions where NCIs do not co-occur with an overt negative marker such as fragment answers as shown in the following example:

(81) a. A: ¿Quién vino?
who came
'Who came?'

B: **Nadie**.
NCI-body
'Nobody.'

(Spanish: Zeijlstra 2004: 211)

b. ***Op***¬**[iNEG]** **Nadie[~~uNEG~~]**

C-command in the surface syntax

The NCI in (81a) does not co-occur with any negative marker against which it can check its [uNEG]-feature. Like the case with preverbal non-strict NCIs, NCIs in fragments are said to be 'rescued' by the insertion of Op¬ against which it can check its [uNEG]-feature.

The analysis of NC as syntactic agreement presented here gives a direct answer to the clause-boundedness of the phenomenon: an NCI cannot establish an agreement relation with a negation in a higher clause because Agree as a syntactic operation is clause-bounded.

Furthermore, the ability of NCIs in subjunctive clauses to violate this clause-boundedness restriction on the licensing of NCIs also follows naturally in light of the observation that subjunctive clauses are transparent to syntactic operations. Consider the following sentences from Italian:

(82) a.*Non ho detto che **nessuno** e arrivato.
neg say.1S that NCI-body has.IND arrived
'I don't say that anybody has arrived'

b. Non pretendo che **nessuno** dica **niente**.
Neg ask.1S that NCI-body says.SUBJ NCI-thing
'I don't ask that anybody says anything'

(Italian: Zeijlstra 2004: 266)

(83) a.*Quel dittatorei$_i$ ha detto che notiziari televisivi parleranno a lunge
The dictator has said that news.programs TV talk.FUT.IND at long
delle **propriei**$_i$ gesta.
of.the own deeds
'The dictator said that the news programs will talk a lot about his own deeds'

b. Quel dittatorei$_i$ ha detto che notiziari televisivi parlino a lunge
The dictator has said that news.programs TV talk.FUT.SUBJ at long
delle **propriei**$_i$ gesta.
of.the own deeds
'The dictator said that the news programs would talk a lot about his own deeds'

(Italian: Zeijlstra 2004: 267)

The sentences in (82) show that an NCI that is embedded in a subordinate clause can be licensed by a negative marker in the matrix clause only when that NCI is in a subjective clause and not in an indicative clause. In (82a), the subordinate NCI *nessuno* is in an indicative clause and thus it cannot be licensed by the negative marker in the main clause. In (82b), on the other hand, the subordinate NCIs *nessuno* and *niente* are in a subjective clause and thus they can be licensed by the negative marker in the main clause. Likewise, the sentences in (83) show that an anaphor that

is embedded in a subordinate clause can refer to an antecedent in a matrix clause only when that anaphora is in a subjunctive clause and not in an indicative clause. In (83a), the subordinate anaphor *propriei* is in an indicative clause and thus it cannot refer to the antecedent in the main clause. In (83b), on the other hand, the subordinate anaphor *propriei* is in a subjunctive clause and thus it can refer to the antecedent in the main clause. The parallelism between NCI licensing and anaphor licensing suggests that NCI licensing is subject to syntactic locality constraints which, in turn, supports the analysis of NC as syntactic agreement.

This analysis of the clause-boundedness of NC extends to JA. As we have previously seen in Chapter 3, long-distance subordinate NCIs in JA can be licensed by a negative marker in a higher clause only when they occur in a subjunctive clause and not in an indicative clause as shown in the following examples:

(84) a.*Maryam ma-gālat ʔənn-ha ʃtarat **wala** ktāb.
Mary NEG-said.3SF that-her bought.3SF.IND NCI-DET book
'Mary did not say that she bought any book.'

b. Maryam *(ma)-biddha təʃtari **wala** ktāb.
Mary NEG-want.3SF buy.3SF. SUBJ NCI-DET book
'Mary does not want to buy any book.'

In (84a), the subordinate NCI *wala* is in an indicative clause and thus it cannot be licensed by the negative marker in the main clause. In (84b), on the other hand, the subordinate NCI *wala* is in a subjunctive clause and thus it can be licensed by the negative marker in the main clause.

Zeijlstra and Penka also provide an analysis for constructions that license NCIs in spite of the fact that they do not include an overt sentential negative operator such as the complement clauses of prepositions like *without* and *before*, and the complement clauses of adversative predicates like *doubt* as shown in the following examples from Spanish:

(85) a. Pedro compró el terreno sin contarselo a **nadie**.
Pedro bought the land without telling to NCI-body
'Peter bought the land without telling anybody'

b. Antec de hacer **nada**, debes lavarle las manos
before of do NCI-thing, must.2S wash.CL the hands
'Before doing anything, you should wash your hands'

c. Dudo que vayan a encontar **nada**.
doubt.1S that will.3P.SUBJ find NCI-thing
'I doubt they will find anything'
(Spanish: Herburger 2001: 297; cited in Zeijlstra 2004: 200)

These sentences do not involve an overt negative marker against which NCIs can check their [uNEG]-feature; however, the sentences are still grammatical. Zeijlstra (2004) argues that prepositions like *without* and *before*, and adversative predicates like *doubt* are not only intuitively negative but also formally negative. He argues that such elements can be lexically decomposed into a negative element and a non-negative element. For example, the adversative predicate *doubt* can be decomposed into *not be sure*. The negative element that is assumed to be involved in the composition of prepositions such as *without* and *before* and in the composition of adversative predicates such as *doubt* provides the [iNEG]-feature against which NCIs can check their [uNEG]-feature. Notice, further, that the licensing of NCIs with *without*-clauses, *before*-clauses, and adversative predicates involves a subordinate NCI that is licensed by an element in a higher clause and thus these constructions seem to violate the clause-boundedness constraint on NCI licensing. However, this violation no longer holds provided that NCIs are grammatical in these constructions only when they are in a subjunctive clause and not an indicative clause. For example, the NCIs in (85) above occur in a subjunctive clause rather than an indicative clause.

The analysis of NCI licensing in negative-like contexts presented here extends to JA. Data from JA show that, unlike NCIs in languages like Spanish, NCIs in JA are acceptable with

without-clauses and *before*-clauses but not with adversative predicates as shown in the following examples:

(86) a. Maryam ṭalaʕat bidūn ma təħki **wala** kilmih.
Mary left.3SF without COMP. say.3SF.SUBJ NCI-DET word
'Mary left without saying any word.'

b. Maryam ṭalaʕat gabil ma tdʒ͡āwib **wala** suʔāl.
Mary left.3SF before COMP. answer.3SF.SUBJ NCI-DET question
'Mary left before answering any question.'

c.*Maryam ankarat ʔənn-ha ħakat **wala** kilmih.
Mary denied.3SF that-her said.3SF.IND NCI-DET word
'Mary denied that she said any word.'

The differences between Spanish and JA with regard to NCI licensing in negative-like contexts follow immediately from the analysis presented here. NCIs in Spanish are acceptable in *without*-clauses, *before*-clauses, and adversative predicates because NCIs in Spanish occur in a subjunctive clause in all these contexts as shown in the examples in (85) above. NCIs in JA, on the other hand, are acceptable in *without*-clauses and *before*-clauses, but not with adversative predicates because NCIs in JA occur in a subjunctive clause only in *without*-clauses and *before*-clauses, whereas they occur in an indicative clause following adversative predicates as shown in the examples in (86) above.

The discussion of the syntactic agreement approach of NC presented so far in this subsection shows that this approach fares better than all previous approaches. In particular, this approach does not face the problem of accounting for the differences between NCIs, on the one hand, and NPIs or negative quantifiers, on the other hand, as this approach considers NCIs to be neither NPIs nor negative quantifiers but rather non-negative indefinites that serve as markers of sentential negation. This approach also provides straightforward answers to the locality

constraints on NCI licensing and the distribution of NCIs in negative-like contexts as have been discussed earlier.

It remains to see how the syntactic agreement approach presented here accounts for the distinction between non-strict NC-languages and strict NC-languages. Zeijlstra (2004, 2008) argues that the distinction between these two varieties of languages follows from the different negativity features of their negative markers: negative markers in non-strict NC-languages are assumed to be semantically negative and thus bear an [iNEG]-feature; whereas negative markers in strict NC-languages are assumed to be semantically non-negative and thus bear an [uNEG]-feature. Let us see how this distinction between the negativity features of negative markers of the two varieties of languages accounts for their differences with regard to NC.

First, consider the following examples from Italian, a non-strict NC-language. Recall that negative markers are assumed to be semantically negative in non-strict NC-languages and thus bear an [iNEG-feature] under Zeijlstra and Penka's system:

(87) a. Gianni **non** telefona a **nessuno**.
Gianni NEG call to NCI-person
'Gianni does not call anybody.'

(Italian: Penka 2011: 48)

b. Gianni **non**$_{[iNEG]}$ telefona a **nessuno**$_{[\sout{uNEG}]}$
C-command in the surface syntax

(88) a. **Nessuno** **non** ha mangiato.
NCI-person NEG has eaten
'Nobody did not eat.'

(Italian: Penka 2011: 53)

b. ***Op***¬$_{[iNEG]}$ **Nessuno**$_{[\sout{uNEG}]}$ **non**$_{[iNEG]}$ ha mangiato
C-command in the surface syntax

The post-verbal NCI *nessuno* in (87a) is assumed to be licensed by checking its [uNEG]-feature against the [iNEG]-feature of the negative marker *non* via Agree under c-command in the surface syntax as shown in (87b). In contrast, the preverbal NCI *nessuno* in (88a) cannot check its [uNEG]-feature against the [iNEG]-feature of the negative marker *non* as it is not commanded by it in the surface syntax. Instead, a c-commanding *Op*¬ is inserted to check the [uNEG]-feature on *nessuno* as shown in (88b). This analysis explains why the combination of an NCI and a negative marker in non-strict NC-languages like the one in (88a) can only have a double negation reading, but never a concordant reading. Such sentences are assumed to have an underlying structure with two semantically negative elements: the negative marker and *Op*¬. Thus, preverbal NCIs in non-strict NC-languages do not need to be combined with an overt negative marker because they are licensed by *Op*¬ rather than the negative marker itself. Consider the following examples from Italian:

(89) a. **Nessuno** telefona a Gianni.
NCI-person call to Gianni
'Nobody calls Gianni.'

(Italian: Penka 2011: 49)

b. ***Op***¬**[iNEG]** **Nessuno[~~uNEG~~]** telefona a Gianni

C-command in the surface syntax

Strict NC-languages, on the other hand, are assumed to exhibit negative markers that are semantically non-negative. Negative markers in strict NC-languages are assumed to pattern with NCIs in the sense that they are argued to bear an [uNEG]-feature that needs to be checked and deleted against an [iNEG]-feature of a semantic negation in the clause. Negative markers in strict NC-languages are assumed to check their [uNEG]-feature against the [iNEG]-feature of *Op*¬ as shown in the following example from Polish.

(90) a. Jan **nie** pojecha~~ł~~ do Warszawy.
Jan NEG go.3SG.PAST to Warsaw
'Jan did not go to Warsaw.'

(Polish: Błaszczak 2001: 140)

b. ***Op***¬$_{[iNEG]}$ Jan **nie**$_{[u\sout{NEG}]}$ pojecha~~ł~~ do Warszawy

C-command in the surface syntax

The [uNEG]-feature on both negative markers and NCIs in strict NC-languages are assumed to be checked against the [iNEG]-feature of *Op*¬ via Agree under c-command regardless of whether NCIs appear in a post-verbal or preverbal position as shown in the following examples:

(91) a. Jan **nie** pojecha~~ł~~ do **nigdzie**.
Jan NEG go.3SG.PAST to NCI-place
'Jan did not go anywhere.'

(Polish)

b. ***Op***¬$_{[iNEG]}$ Jan **nie**$_{[u\sout{NEG}]}$ pojecha~~ł~~ do **nigdzie**$_{[u\sout{NEG}]}$

C-command in the surface syntax

(92) a. **Nikt** **nie** przyszed~~ł~~.
NCI-person NEG came
'Nobody came.'

(Polish: Błaszczak 2001: 140)

b. ***Op***¬$_{[iNEG]}$ **Nikt**$_{[u\sout{NEG}]}$ **nie**$_{[u\sout{NEG}]}$ przyszed~~ł~~

C-command in the surface syntax

This analysis explains why NCIs never induce a double negation reading in strict NC-languages regardless of their position in the sentence. Negative markers and NCIs in these languages are semantically non-negative and hence only the abstract negative operator *Op*¬ contributes negation to the interpretation.

The syntactic agreement analysis of NC presented in this subsection faces two serious problems: one that has to do with the redundancy of negative markers in NC-constructions, and another that has to do with the negativity features of negative markers in languages that exhibit both varieties of NC such as JA. I discuss both problems in turn below.

The analysis presented here assumes that NCIs can function as markers of sentential negation: the presence of an NCI in a given sentence is sufficient to trigger the presence of an abstract negative operator that expresses sentential negation. Thus, this analysis predicts that negative makers should be redundant in NC-constructions. This prediction is not borne out. In fact, the presence of a negative marker is obligatory with post-verbal NCIs in non-strict NC-languages such as Italian (93), and with both post-verbal and preverbal NCIs in strict NC-languages such as Polish (94).

(93) Gianni *(**non**) telefona a **nessuno**.
Gianni NEG call to NCI-person
'Gianni does not call anybody.'

(Italian: Penka 2011: 48)

(94) a. Jan *(**nie**) pojechał do **nigdzie**.
Jan NEG go.3SG.PAST to NCI-place
'Jan did not go anywhere.'

b. **Nikt** *(**nie**) przyszedł.
NCI-person NEG came
'Nobody came.'

(Polish: Błaszczak 2001: 140)

Zeijlstra (2004) addresses this problem by arguing that the obligatory presence of negative markers in NC-constructions follows from the nature of NCIs as indefinite items in the sense of Heim (1982), where indefinites are considered to denote free variables that need to be bound by some operator. Zeijlstra shows that the indefinite nature of NCIs can explain the

asymmetry between post-verbal and preverbal NCIs in non-strict NC-languages. Following Herburger (2001), he shows that a post-verbal NCI not accompanied by a negative marker cannot express a meaning with sentential negation, but only a meaning with negation taking scope below the quantifier binding the event variable introduced by the verb. He ascribes this to the status of NCIs as non-quantificational indefinites. NCIs are assumed to lack quantificational force and thus post-verbal NCIs that are not accompanied by a negative marker are assumed to be licensed in situ by the insertion of *Op*¬ in a position within VP resulting in a reading which asserts that the event took place, but one of its thematic roles is not realized. For a reading with sentential negation, a preverbal negative marker needs to be present with post-verbal NCIs as this is the only way for negation to take scope from a position outside VP. In contrast, preverbal NCIs are licensed by an abstract negative operator *Op*¬ in a position outside VP and thus they are sufficient to express sentential negation on their own.

Penka (2011: 54) points out one major problem with this explanation. She shows that it does not extend to preverbal NCIs in strict NC-languages and thus a different explanation is in need:

> 'Note also that Zeijlstra's explanation as it stands only applies to post-verbal NIs [negative indefinites (i.e. NCIs)]. It has nothing to say about the question why preverbal NIs in strict NC-languages also have to be accompanied by a negative marker on the verb. Surely, a preverbal NI should be sufficient for the purposes of marking the scope of the negation. Thus, the obligatory presence of a negative marker in certain cases cannot be reduced to NIs being indefinite expressions and a different explanation is needed.'

According to Penka, Zeijlstra's analysis predicts that, like preverbal NCIs in non-strict NC-languages, preverbal NCIs in strict NC-languages should be able to express sentential negation on their own, which is not the case. I now move to the second problem with the syntactic

agreement analysis of NC presented here which has to do with languages like JA that exhibit both varieties of NC at the same time.

We have previously seen that JA exhibits both strict NC and non-strict NC. On one hand, the *never*-words and the *not-yet*-words must always be accompanied by a negative marker regardless of whether they appear in a post-verbal position or a preverbal position.

(95) a. Maryam *(ma)-btōkil tuffāħ **bilmarrah**.
Mary NEG-eat.3SF apples NCI-time
'Mary does not eat apples at all.'

b. **bilmarrah** Maryam *(ma)-btōkil tufāħ.
NCI-time Mary NEG-eat.3SF apples
'Mary does not eat apples at all.'

(96) a. Maryam *(ma)-ʃtarat l-ktāb **laħaddəlʔān**.
Mary NEG-bought.3SF the-book NCI-time
'Mary has not bought the book yet.'

b. **laħaddəlʔān** Maryam *(ma)-ʃtarat l-ktāb.
NCI-time Mary NEG-bought.3SF the-book
'Mary has not bought the book yet.'

One the other hand, the scalar focus particle *wala* must be accompanied by the negative marker in a post-verbal position, but not in a preverbal position:

(97) a.*(ma)-d͡ʒa **wala** wāħad.
NEG-came.3S NCI-DET one
'No one came.'

b. **wala** wāħad (*ma)-d͡ʒa.
NCI-DET one NEG-came.3S.
'No one came.'

Preverbal *wala*-phrases that are accompanied by the negative marker can only by grammatical with a double negation reading, but never a concordant reading:

(98) **wala** wāħad ma-d͡ʒa.
NCI-DET one NEG-came.3S.
'No one did not come.'

The data presented here show that while the *never*-words and the *not-yet*-words function as strict NCIs in JA, the scalar focus particle *wala* functions as a non-strict NCI. As has previously pointed out, these data suggest a classification of NC as either strict or non-strict should apply at the level of lexical items rather than at the language level.

Notice that both strict and non-strict NCIs in JA appear with the same negative marker, *ma-*. Under the analysis of NC presented here, it is not clear what negativity features we should assign the negative marker in JA: [iNEG] or [uNEG]. JA exhibits both strict NC and non-strict NC and thus the negative marker is compatible with both kinds of negative features. This problem is most evident in sentences that have both a strict and a non-strict NCI at the same time as shown in the following example:

(99) Maryam *(**ma**)-garat **wala** ktāb **bilmarrah**.
Mary NEG-read.3SF NCI-DET book NCI-time
'Mary did not read any book at all.

This example involves the non-strict NCI *wala* and the strict NCI *bilmarrah* both co-occurring with the negative marker *ma-*. Following the assumptions of the syntactic agreement analysis of NC presented here, it is not clear what negativity feature we should assign the negative marker *ma-* in sentences like (99) above. The negative marker co-occurs with both a strict NCI and a

non-strict NCI at the same time and thus seems to be compatible with both an [iNEG]-feature and an [uNEG]-feature at the same time.

The discussion of the syntactic agreement analysis of NC presented in this subsection has focused on the merits and demerits of this analysis. The assumption that NCIs are non-negative indefinites rather than non-negative NPIs or negative quantifiers makes this analysis advantageous over all previous analyses. Unlike the case with some approaches that assume that NCIs are NPIs, the analysis presented here does not need to explain the differences between NCIs and NPIs as it assumes that these two sets of items belong to different categories. Furthermore, unlike the case with approaches that assume that NCIs are negative quantifiers, the analysis presented here does not need to explain the observation that NCIs seem to lose their negative force in some contexts because it assumes that NCIs are non-negative. However, this analysis has been shown to suffer two major problems. These include the redundancy of the negative marker in NC-constructions, and the status of the negative marker in languages like JA that exhibit both varieties of NC simultaneously.

In the following subsection, I will argue that the syntactic agreement analysis of NC presented here can still be maintained under some crucial modifications. I argue with Zeijlstra and Penka that NCIs are markers of sentential negation bearing an [uNEG]-feature that needs to be checked against an [iNEG]-feature of a semantic negation that can be covert in the clause. However, I diverge from them with regard to the negativity features of negative markers in NC-languages, and with regard to the mechanisms under which this feature checking operation takes place. I make it clear that the account I am proposing overcomes the problems that arise from the proposals of Zeijlstra and Penka.

5.3.5 An Alternative Account

In this subsection, I present an alternative account to NC. The account I am proposing is basically a modification of the proposals of Zeijlstra and Penka presented in the previous subsection. From their proposals, I adopt the assumption that NCIs are non-negative indefinites endowed with an [uNEG]-feature that needs to be checked against a semantic negation bearing an [i-NEG]-feature in order for the sentence not to crash. I also adopt the assumption that the licensing semantic negation does not need to be overt but rather can be introduced by an abstract negative operator that is subject to an economy condition. However, I diverge from them with regard to the negativity features of negative markers in NC-languages, and with regard to the mechanisms under which an NCI can check its [uNEG]-feature. I argue that negative markers are semantically negative in both strict and non-strict NC-languages. I also propose that the level of representation at which NC takes place is not the same among all NCIs: while some NCIs are licensed at LF, other NCIs are licensed in the surface syntax. I further argue that an NCI can check its [uNEG]-feature either under c-command, Spec-head agreement, or Head-complement agreement. In what follows, I will take these assumptions in turn and show how they can account for NC in JA and other NC-languages.

- Negative markers are semantically negative thus bearing an [iNEG]-feature in both strict and non-strict NC-languages.

Unlike the account proposed by Zeijlstra and Penka, the account I am proposing here assumes that negative markers are semantically negative thus bearing an [iNEG]-feature that can license NCIs in both strict and non-strict NC-languages. The assumption that negative markers are semantically negative in both varieties of NC-languages makes it possible to overcome the problems raised by Zeijlstra and Penka's proposals. Under this assumption, we do not need to

worry about the obligatory presence of negative markers in some NC-constructions. The negative marker is always semantically negative and its presence is sometimes necessary to license NCIs. We also do not need to worry about languages like JA that exhibit both varieties of NC at the same time. We do not need to assign the same negative marker in such languages different negativity features as negative markers are assumed to be always semantically negative in NC-languages under the analysis I am proposing here.

- Some NCIs are licensed at LF; whereas other NCIs are licensed in the surface syntax

I assume that the level of representation at which NC takes place is not the same among all NCIs. In particular, I assume that while some NCIs are licensed at LF, other NCIs are licensed in the surface syntax. I will show that this assumption can account for the distributional differences between strict NCIs and non-strict NCIs in JA.

On one hand, strict NCIs in JA, namely the *never*-words and the *not-yet*-words, must be accompanied by an overt negative marker regardless of whether they appear in a post-verbal or a preverbal position:

(100) a. Maryam *(ma)-btōkil tuffāħ **bilmarrah**.
Mary NEG-eat.3SF apples NCI-time
'Mary does not eat apples at all.'

b. **bilmarrah** Maryam *(ma)-btōkil tufāħ.
NCI-time Mary NEG-eat.3SF apples
'Mary does not eat apples at all.'

(101) a. Maryam *(ma)-ʃtarat l-ktāb **laħaddəlʔān**.
Mary NEG-bought.3SF the-book NCI-time
'Mary has not bought the book yet.'

b. **laħaddəlʔān** Maryam *(ma)-ʃtarat l-ktāb.
NCI-time Mary NEG-bought.3SF the-book
'Mary has not bought the book yet.'

One the other hand, non-strict NCIs in JA, namely *wala*-phrases, must be accompanied by an overt negative marker when they appear in a post-verbal position, but not when they appear in a preverbal position:

(102) a.*(ma)-d͡ʒa **wala** wāħad.
NEG-came.3S NCI-DET one
'No one came.'

b. **wala** wāħad (*ma)-d͡ʒa.
NCI-DET one NEG-came.3S
'No one came.'

Preverbal *wala*-phrases that are accompanied by a negative marker can only by grammatical with a double negation reading, but never a concordant reading:

(103) **wala** wāħad ma-d͡ʒa.
NCI-DET one NEG-came.3S
'No one did not come.'

I will show that this asymmetry in the distribution of strict and non-strict NCIs in JA is the result of the fact that the licensing of these two types of NCIs is not subject to the same level of representation. In particular, I will show that while strict NCIs in JA are licensed at LF, non-strict NCIs in JA are licensed in the surface syntax.

Strict NCIs in JA must be accompanied by an overt negative marker in both a post-verbal as well as a preverbal position because they are licensed by an overt negative marker in both positions. The distribution of strict NCIs in JA follows if we assume that the licensing of these NCIs takes place at LF rather than in the surface syntax. This assumption is necessary to account for preverbal strict NCIs in JA. Preverbal strict NCIs in JA are not in the c-command domain of a negative marker in the surface syntax; however, they still require an overt negative marker in

order to be licensed. The assumption that strict NCIs in JA are licensed at LF is supported by the fact that preverbal strict NCIs in the language are focus-fronted elements that are derived by movement. Like all other focus-fronted elements in the language, preverbal strict NCIs in JA display reconstruction effects such as Island Constraints as shown in the following examples:

(104) a.***bilmarrah** Maryam marðit laʔənn-ha ma-bətɣassil ʔadē-ha.
NCI-time Mary got-sick.3SF because-her NEG-wash.3SF hands-her
'Mary got sick because she does not wash her hands at all.'

b.***laħaddəlʔān** Maryam rasabat laʔənn-ha ma-sallamat l-wād͡ʒib.
NCI-time Mary failed.3SF because-her NEG-submitted.3SF the-assignment
'Mary failed because she has not submitted the assignment yet.'

(105) a.***bilmarrah** Maryam ʃāfat z-zalamih ʔəlli ma-bəynām.
NCI-time Mary saw.3SF the-man who NEG-sleep.3SM
'Mary saw the man who does not sleep at all.'

b.***laħaddəlʔān** Maryam ʕaqabat ṭ-ṭullāb ʔəlli ma-sallamu l-wād͡ʒib.
NCI-time Mary punished.3SF the-students who NEG-submitted.3P the- assignment
'Mary punished the students who have not submitted the assignment yet.'

(106) a.***bilmarrah** Maryam btiʕrif ʔayy ṭālib ma-ħall l-ʔassilih.
NCI-time Mary know.3SF which student NEG-answered.3S the-questions
'Mary knows which student did not answer the questions at all.'

b.***laħaddəlʔān** Maryam btiʕrif ʔayy ṭālib ma-ʃtara l-ktāb.
NCI-time Mary know.3SF which student NEG-bought.3S the-book
'Mary knows which student has not bought the book yet.'

These examples show that preverbal strict NCIs in JA obey the Adjunct Island Constraint (104), the Complex NP Constraint (105), and the Wh-Island Constraint (106). This indicates that, at LF, preverbal strict NCIs in JA reconstruct to their base position where they are interpreted in the c-command domain of an overt negative marker. Consequently, preverbal strict NCIs in JA

check their [uNEG]-feature against an [iNEG]-feature of a negative marker under c-command at LF as shown in (107a) and its LF structure in (107b) below:[11]

(107) a. **bilmarrah** Maryam *(ma)-btōkil tuffāħ.
NCI-time Mary NEG-eat.3SF apples
'Mary does not eat apples at all.'

b. [$_{FP}$ **~~bilmarrah~~$_{[uNEG]i}$** **[**$_{XP}$ Maryam **ma$_{[iNEG]}$**-btōkil tuffāħ **bilmarrah$_{[uNEG]i}$**]]

C-command at LF

Non-strict NCIs in JA, on the other hand, must be accompanied by an overt negative marker in a post-verbal position, but not in a preverbal position because they are licensed by an overt negative marker only in a post-verbal position. The distribution of non-strict NCIs in JA follows if we assume that the licensing of these NCIs takes place in the surface syntax rather than at LF. This assumption is necessary to account for focus-fronted non-strict NCIs in JA. Non-strict NCIs in JA can be focus-fronted; however, they are still incompatible with the presence of an overt negative marker as shown in the following example:

(108) **wala** suʔāl Maryam (*ma)-ħallat.
NCI-DET question Mary NEG-answered.3SF
'Mary did not answer any question'

Like all other focus-fronted elements in the language, focus-fronted non-strict NCIs in JA display reconstruction effects such as Island Constraints as shown in the following examples:

[11] The analysis I have provided for strict NCIs in JA is assumed to account for the distribution of all of the *never*-words and the *not-yet*-words in the language except for the *not-yet*-word *baʕid*. The *not-yet*-word *baʕid* displays a rather strange behavior and thus calls for a different analysis. This word displays the typical properties of heads in Arabic and it always surfaces in a preverbal position. I provide an analysis for such expressions later in this subsection.

(109) ***wala** suʔāl Maryam rasabat laʔənn-ha ma-ħallat.
NCI-DET question Mary failed.3SF because-her NEG-answered.3SF
'Mary failed because she did not answer any question.'

(110) ***wala** suʔāl Maryam ʕaqabat ṭ-ṭullāb ʔəlli ma-ħallu.
NCI-DET question Mary punished.3SF the-students who NEG.answered.3P
'Mary punished the students who did not answer any question.'

(111) ***wala** suʔāl Maryam btiʕrif ʔayy ṭālib ma-ħall.
NCI-DET question Mary know.3SF which student NEG-answered.3S
'Mary knows which student did not answer any question.'

These examples show that focus-fronted non-strict NCIs in JA obey the Adjunct Island Constraint (109), the Complex NP Constraint (110), and the Wh-Island Constraint (111). This indicates that, at LF, the focused-fronted non-strict NCI *wala suʔāl* in, for example, (112a) below reconstructs to its base position where it is interpreted in the c-command domain of the negative marker *ma-* as shown in (112b); however, the sentence is still incompatible with the presence of the negative marker. This clearly indicates that, in contrast to strict NCIs in the language, non-strict NCIs in JA are licensed in the surface syntax rather than at LF.

(112) a. **wala** suʔāl Maryam (*ma)-ħallat.
NCI-DET question Mary NEG-answered.3SF
'Mary did not answer any question'

b. [$_{FP}$ ~~**wala**$_{[uNEG]}$ suʔāl~~$_i$ [$_{XP}$ Maryam **ma**$_{[iNEG]}$-ħallat **wala**$_{[uNEG]}$ suʔāl$_i$]]
C-command at LF

Following Zeijlstra (2004, 2008) and Penka (2007, 2011), I argue that preverbal non-strict NCIs in JA are licensed by an abstract negative operator *Op*¬ inserted in a position immediately c-command these NCIs as shown in the following examples:

(113) a. **wala** suʔāl Maryam ħallat.
NCI-DET question Mary answered.3SF
'Mary did not answer any question'

b. ***Op*¬$_{[iNEG]}$ wala$_{[\underline{u}\underline{\text{NEG}}]}$** suʔāl Maryam ħallat.
C-command in the surface syntax

(114) a. **wala** wāħad d͡ʒa.
NCI-DET one came.3S.
'No one came.'

b. ***Op*¬$_{[iNEG]}$ wala$_{[\underline{u}\underline{\text{NEG}}]}$** wāħad d͡ʒa.
C-command in the surface syntax

The insertion of *Op*¬ in sentences with preverbal non-strict NCIs provides a straight forward explanation to the fact that a combination of a preverbal non-strict NCI and a negative marker can only induce a double negation reading, but never a concordant reading. These sentences induce only a double negation reading because they involve two semantic negations: the one associated with *Op*¬ and the one associated with the negative marker as shown in the following examples:

(115) a. **wala** suʔāl Maryam ma-ħallat.
NCI-DET question Mary NEG-answered.3SF
'Mary did not answer no question'

b. ***Op*¬$_{[iNEG]}$ wala$_{[\underline{u}\underline{\text{NEG}}]}$** suʔāl Maryam **ma$_{[iNEG]}$**-ħallat.
C-command in the surface syntax

(116) a. **wala** wāħad ma-d͡ʒa.
NCI-DET one NEG-came.3S.
'No one did not come.'

b. ***Op***¬**[iNEG]** **wala[~~uNEG~~]** wāħad **ma[iNEG]**-d͡ʒa.
C-command in the surface syntax

The abstract negative operator analysis also extends to Negative Spread constructions in JA where an NCI is licensed when it is accompanied by another NCI. NCIs in JA (both strict and non-strict) are licensed when they are accompanied by a preverbal *wala*-phrase in spite of the fact that a negative marker is not present in the sentence as shown in the following examples:

(117) a. **wala** ṭālib ħall **wala** suʔāl.
NCI-DET student answered.3S NCI-DET question
'No student answered any question.'

b. **wala** wāħad akal tuffāħ **bilmarrah**.
NCI-DET one NEG-ate.3S apples NCI-time
'No one ate apples at all.'

c. **wala** ṭālib ʃtara l-ktāb **laħaddəlʔān**.
NCI-DET student NEG-bought.3S the-book NCI-time
'No student has bought the book yet.'

The Negative Spread constructions in (117) above need not involve a negative marker because both preverbal and post-verbal NCIs in these constructions are licensed by the abstract negative operator *Op*¬. These constructions involve a preverbal *wala*-phrase which, as we saw earlier, is licensed by the abstract negative operator *Op*¬ rather than an overt negative marker. Since *Op*¬ is already present in the structure, it can also license other NCIs in post-verbal position and render the negative marker unnecessary as shown in the following example:

(118) a. **wala** ṭālib ħall **wala** suʔāl.
NCI-DET student answered.3S NCI-DET question
'No student answered any question.'

b. ***Op***¬**[iNEG]** **wala[~~uNEG~~]** ṭālib ħall **wala[~~uNEG~~]** suʔāl.
C-command in the surface syntax

This analysis predicts that Negative Spread constructions that involve an overt negative marker will result in a reading with double negation rather than a concordant reading. Such constructions will involve two semantic negations: the one associated with the abstract negative operator and the one associated with the negative marker. This prediction is borne out as shown in the following example:

(119) a. **wala** ṭālib ma-ħall **wala** suʔāl.
NCI-DET student NEG-answered.3S NCI-DET question
'No student did not answer any question.'

b. ***Op***¬**[iNEG]** **wala[~~uNEG~~]** ṭālib **ma[iNEG]**-ħall **wala[~~uNEG~~]** suʔāl.
C-command in the surface syntax

This analysis of Negative Spread constructions in JA is supported by the fact that these constructions are only allowed with preverbal *wala*-phrases, but not with preverbal strict NCIs in the language. NCIs in JA require the presence of an overt negative marker when they are accompanied by a preverbal strict NCI as shown in the following examples:

(120) a. **laħaddəlʔān** *(ma)-ħaka **wala** kilmih.
NCI-time NEG-said.3sm NCI-DET word
'He has not said any word yet.'

b. **laħaddəlʔān** *(ma)-ħaka **bilmarrah**.
NCI-time NEG-called.3SM NCI-time.
'He has not called at all yet.'

The presence of the negative marker is required in these sentences because these sentences do not involve the abstract negative operator *Op*¬. Following Zeijlstra (2004, 2008) and Penka (2007, 2011), I argue that the insertion of *Op*¬ is subject to an economy condition: an *Op*¬ is only inserted when the derivation involves an element with a [uNEG]-feature that would remain unchecked otherwise. The insertion of *Op*¬ in sentences like (120) above will violate the economy condition on the insertion of *Op*¬. We have previously seen that, unlike preverbal *wala*-phrases, preverbal strict NCIs in JA can be licensed by an overt negative marker since the licensing of these items takes place at LF. Consequently, the insertion of *Op*¬ in order to license preverbal strict NCIs in JA will violate the economy condition on the insertion of *Op*¬ since these NCIs are already licensed by an overt negative marker.

Finally, the abstract negative operator analysis accounts for NCIs in fragment answers such as the one involved in the following example:

(121) A: mīn d͡ʒa?
who came.3S
'Who came?'

B: **wala** wāḥad.
NCI-DET one
'No one.'

The *wala*-phrase in (121B) is not accompanied by an overt negative marker; however, the sentence is still grammatical. Following Ziejlstra (2004, 2008) and Penka (2007, 2011), I argue that NCIs in fragment answers check their [uNEG]-feature against the [iNEG]-feature of the abstract negative marker *Op*¬ as shown in the following structure of the fragment answer in (121B) above:

(122) ***Op***¬**[iNEG]** **wala[uNEG]** wāħad.

C-command in the surface syntax

Unlike the analysis of Penka and Zeijlstra who assume that NC uniformly takes place either in the surface syntax or at any level of the representation, the data presented here shows that the level of representation at which NC takes place is not the same among all NCIs. I have shown that such an analysis accounts for the distributional differences between strict and non-strict NCIs in JA. In what follows, I will argue for another modification on the proposals of Zeijlstra and Penka. In particular, I will show that Spec-head agreement and Head-complement agreement should be added to the licensing configurations for NCIs.

- NCIs can be licensed through c-command, Spec-head agreement, or Head-complement agreement.

The data that I will present here will show that Spec-head agreement and Head-complement agreement exist side by side with c-command as licensing configurations for NCIs. I will show that the availability of Spec-head agreement as a licensing configuration of NCIs can explain the distributional differences between NCIs in JA and another variety of spoken Arabic, namely Moroccan Arabic. I will also show that the availability of Head-complement agreement as a licensing configuration of NCIs can explain the rather strange behavior of some NCIs in JA and Moroccan Arabic.

Let us first start with Spec-head agreement. I assume that, in addition to c-command, NCIs can also be licensed if they are in Spec-head agreement with a negative marker. I will show that this assumption can account for the asymmetric behavior of the class of NCIs that function as determiners in JA and Moroccan Arabic. On one hand, JA exhibits the determiner NCI *wala* which, as we have previously seen, functions as a non-strict NCI in the sense that it must be

accompanied by a negative maker only when it surfaces in a post-verbal position as shown in the following examples:

(123) a.*(ma)-d͡ʒa **wala** wāħad.
NEG-came.3S NCI-DET one
'No one came.'

b. **wala** wāħad (*ma)-d͡ʒa.
NCI-DET one NEG-came.3S
'No one came.'

The combination of a preverbal *wala*-phrase and a negative marker induces a reading with double negation, but never a concordant reading:

(124) **wala** wāħad ma-d͡ʒa.
NCI-DET one NEG-came.3S.
'No one did not come.'

On the other hand, Moroccan Arabic exhibits the determiner NCI *ħətta* 'even' which functions as a strict NCI in the sense that it must be accompanied by a negative marker in both a post-verbal position as well as a preverbal position as shown in the following examples:

(125) a.*(ma)-ʒa **ħətta** waħəd.
NEG-came NCI-DET one
'No one came.'

(Moroccan Arabic: Benmamoun 1997: 269)

b. **ħətta** waħəd *(ma)-ʒa
NCI-DET one NEG-came
'No one came.'

(Moroccan Arabic: Benmamoun 1997: 272)

Benmamoun (1997) provides a detailed analysis of the licensing of the NCI *ħətta* in Moroccan Arabic. He argues that the licensing of *ħətta*-phrases takes place in the surface syntax rather than at LF. He also argues that the licensing of *ħətta*-phrases can take place either through c-command or through Spec-head agreement.

In post-verbal position, *ħətta*-phrases are in the c-command domain of a negative marker in the surface syntax and thus they are properly licensed. In preverbal position, one the other hand, *ħətta*-phrases are not in the c-command domain of a negative marker in the surface syntax; however, they are still licensed. Benmamoun proposes that preverbal *ħətta*-phrases are licensed through Spec-head agreement with a negative marker in the surface syntax.

Benmamoun supports the conclusion that *ħətta*-phrases in MA are not licensed at LF but rather in the surface syntax by showing that these phrases cannot participate in focus-fronting constructions in the language which display reconstruction effects as shown in the following examples:

(126) a. kanu lə-wlad taylәʕbu **mʕa baʕḍhum**.
were.3P the-boys play.3P with each.other
'The children were playing with each other.'

b. **mʕa baʕḍhum** kanu lə-wlad taylәʕbu.
with each.other were.3P the-boys play.3P
'The children were playing with each other.'

(Moroccan Arabic: Benmamoun 1997: 280)

(127) a. ma-kanu lə-wlad taylәʕbu **mʕa ħətta waħəd**.
NEG-were.3P the-boys play.3P with NCI-DET one
'The children were not playing with anyone.'

b.***mʕa ħətta waħəd** ma-kanu lə-wlad taylәʕbu.
with NCI-DET one NEG-were.3P the-boys play.3P
'The children were not playing with anyone.'

(Moroccan Arabic: Benmamoun 1997: 280)

The examples in (126) show that the PP involving the anaphor *baʕḍhum* 'each other' can surface in its base position following the antecedent of that anaphor *lə-wlad* 'the boys' (126a), and it can also be fronted to a position preceding that antecedent in violation of the standard assumption that an anaphor must be c-commanded by its antecedent (126b). Benmamoun takes this to indicate that fronted PPs in Moroccan Arabic are derived by movement. The fronted PP in (126b) is assumed to reconstruct to its base position at LF where the anaphor *baʕḍhum* can be c-commanded by its antecedent *lə-wlad*. The examples in (127), on the other hand, show that the PP involving the NCI *ħətta waħəd* can surface in it base position following the negative marker *ma-* (127a), but it cannot be fronted to a position preceding the negative marker (127b). Benmamoun takes this to indicate that *ħətta*-phrases cannot be licensed at LF. The fronted PP involving the NCI *ħətta* in (127b) is assumed to reconstruct to its base position and thus the NCI *ħətta* is supposed to be in the c-command domain of the negative marker at LF; however, the sentence is still ungrammatical.

Further supporting evidence on the inability of *ħətta*-phrases in Moroccan Arabic to be licensed at LF comes from clitic-left dislocation constructions in the language. For example, *ħətta*-phrases can be clitic-left dislocated as long as a subject does not intervene between a clitic-left dislocated *ħətta*-phrase and a negative marker as shown in the following examples:

(128) a. **ħətta** ktab *(ma)-qrat-u Səlwa.
NCI-DET book NEG-read-it Salwa
'Salwa did not read any book.'

b.***ħətta** ktab Səlwa ma-qrat-u.
NCI-DET book Salwa NEG-read-it
'Salwa did not read any book.'

(Moroccan Arabic: Benmamoun 1997: 281)

Benmamoun assumes a movement analysis of clitic-left dislocation constructions in Moroccan Arabic. Thus, the clitic-left dislocated *ħətta*-phrases in both (128a) and (128b) above are supposed to reconstruct to their original position at LF where they can be interpreted in the c-command domain of the negative marker. This predicts that both (128a) and (128b) above should be grammatical if the licensing of *ħətta*-phrases takes place at LF, which is not the case. Benmamoun shows that the ungrammaticality of (128b) cannot be ascribed to the incompatibility of reconstruction with preverbal subjects since such reconstruction is possible in the context of anaphors as shown in the following example:

(129) mʕa baʕḍhum lə-wlad kanu tayləʕbu.
with each.other the-boys were.3P play.3P
'The children were playing with each other.'
(Moroccan Arabic: Benmamoun 1997: 282)

Instead, Benmamoun attributes the contrast in (128) above to the assumption that, in the surface syntax, the *ħətta*-phrase is in Spec-head agreement with the verbal complex involving the negative marker in (128a) but not in (128b). In (128a), the subject surfaces in a post-verbal position and the *ħətta*-phrase surfaces in a position that is in the domain of the verbal complex involving the negative marker in the surface syntax (i.e. in Spec-head agreement with it). In (128b), on the other hand, the subject surfaces in a preverbal position thus preventing the *ħətta*-phrase to be in the domain of the verbal complex involving the negative marker in the surface syntax.

Further supporting evidence on the assumption that preverbal *ħətta*-phrases in Moroccan Arabic are licensed through Spec-head agreement with a negative marker in the surface syntax comes from sentences with a combination of an auxiliary verb and a main verb in the language. Consider the following contrast:

(130) a. **ma**-kan-ʃ taybɣi Nadya
NEG-was-NEG love Nadia
'He did not love Nadia.'

b. kan **ma**-taybiɣ-ʃ Nadya
was NEG-love-NEG Nadia
'He did not love Nadia.'

(Moroccan Arabic: Benmamoun 2006: 146)

(131) a. **ħətta** waħəd *(ma)-kan taybɣi-h.
NCI-DET one NEG-was love-him
'No one loved him.'

b.***ħətta** waħəd kan ma-taybɣi-h.
NCI-det one was NEG-love-him
'No one loved him.'

(Moroccan Arabic: Benmamoun 2006: 146)

The examples in (130) show that sentential negation in Moroccan Arabic can cliticize either to the auxiliary verb or to the main verb in sentences that involve both kinds of verbs. The examples in (131), on the other hand, show that the story is different with the presence of preverbal *ħətta*-phrases. When preverbal *ħətta*-phrases are present, the sentence is grammatical only when the sentential negative cliticizes to the auxiliary verb. This strongly suggests that preverbal *ħətta*-phrases need to be in the domain of a negative marker in the surface syntax (i.e. in Spec-head agreement with a negative marker). The grammaticality of (131a) as opposed to the ungrammaticality of (131b) follows from the fact that the preverbal *ħətta*-phrase is in Spec-head agreement with the negative marker in the former but not in the latter.

In brief, Benmamoun argues that the licensing of *ħətta*-phrases in Moroccan Arabic takes place in the surface syntax when they are c-commanded by or in Spec-head agreement with a negative marker. C-command accounts for the distribution of *ħətta*-phrases in post-verbal position; whereas Spec-head agreement accounts for the distribution of *ħətta*-phrases in

preverbal position. I will show that this analysis provides a straightforward answer to the contrast between the distribution of *ħətta*-phrases in Moroccan Arabic and *wala*-phrases in JA.

Recall that, in contrast to *ħətta*-phrases in Moroccan Arabic, *wala*-phrases in JA must be accompanied by a negative marker only when they appear in a post-verbal position. *Wala*-phrases can never be accompanied by a negative marker when they appear in preverbal position under a concordant reading. Thus, *ħətta*-phrases and *wala*-phrases pattern similarly in post-verbal position (i.e. both must be accompanied by a negative marker in post-verbal position); whereas they pattern differently in preverbal position (i.e. only *ħətta*-phrases must be accompanied by a negative marker in preverbal position). This contrast can be accounted for as follows under the assumptions I am proposing here.

Both *ħətta*-phrases and *wala*-phrases are licensed in the surface syntax rather than at LF. I have already provided evidence on the assumption that, like *ħətta*-phrases in Moroccan Arabic, *wala*-phrases in JA must be licensed in the surface syntax rather than at LF. We have previously seen that focus-fronted *wala*-phrases in JA cannot be licensed be an overt negative marker in spite of the fact that they are interpreted in the c-command domain of that negative marker at LF (cf. example (108)).

In post-verbal position, both *ħətta*-phrases and *wala*-phrases are in the c-command domain of a negative marker in the surface syntax and thus they are properly licensed. In preverbal position, on the other hand, only *ħətta*-phrases are grammatical because they are in Spec-head agreement with a negative marker in the surface syntax; whereas *wala*-phrases are not. Supporting evidence for the conclusion that preverbal *wala*-phrases are not in Spec-head agreement with a negative marker comes from the distribution of these phrases in clitic-left

dislocation constructions and in sentences with a combination of an auxiliary verb and a main verb.

First, unlike clitic-left dislocated *ħətta*-phrases in Moroccan Arabic, clitic-left dislocated *wala*-phrases in JA cannot be licensed by a negative marker regardless of whether a subject intervenes between a clitic-left dislocated *wala*-phrase and a negative marker or not:

(132) a. **wala** ktāb (*ma)-garat-uh Salwa.
NCI-DET book NEG-read.3SF-it Salwa
'Salwa did not read any book.'

b. **wala** ktāb Salwa (*ma)-garat-uh.
NCI-DET book Salwa NEG-read.3SF-it
'Salwa did not read any book.'

These sentences suggest that, unlike preverbal *ħətta*-phrases, preverbal *wala*-phrases are not in Spec-head agreement with the verbal complex that involves the negative marker. If preverbal *wala*-phrases were in Spec-head agreement with the verbal complex that involves the negative marker, we predict sentence (132a) to require the presence of the negative marker because the *wala*-phrase seems to be in the domain of the negative marker in this sentence as opposed to sentence (132b) where the subject intervenes between the *wala*-phrase and the verbal complex that involves the negative marker.

Second, unlike preverbal *ħətta*-phrases, preverbal *wala*-phrases in the context of a sentence with a combination of an auxiliary verb and a main verb cannot be licensed by a negative marker regardless of whether a negative marker cliticizes to the auxiliary verb or to the main verb. Consider the following examples:

(133) a. **ma**-kān bəyħib Nadya
NEG-was.3SM love.3SM Nadia
'He did not love Nadia.'

b. kān **ma**-bəyħib Nadya
was.3SM NEG-love.3SM Nadia
'He did not love Nadia.'

(134) a. **wala** wāħad (*ma)-kān bəyħib Nadya.
NCI-DET one NEG-was.3SM love.3SM Nadia
'No one loved Nadia.'

b. **wala** wāħad kān (*ma)-byəħib Nadya.
NCI-DET one was.3SM NEG-love.3SM Nadia
'No one loved Nadia.'

The examples in (133) show that, like the case in Moroccan Arabic, a negative marker in JA can cliticize either to the auxiliary verb or to the main verb in sentences that involve both kinds of verbs. The examples in (134), on the other hand, show that, unlike the case with preverbal *ħətta*-phrases, preverbal *wala*-phrases cannot be licensed by a negative marker regardless of whether the negative marker cliticizes to the auxiliary verb or to the main verb. This suggests that, in contrast to preverbal *ħətta*-phrases, preverbal *wala*-phrases are not in Spec-head agreement with the verbal complex that involves the negative marker. If preverbal *wala*-phrases were in Spec-head agreement with the verbal complex that involves the negative marker, we predict sentence (134a) to require the presence of the negative marker because the *wala*-phrase seems to be in the domain of the negative marker in this sentence as opposed to sentence (134b) where the auxiliary verb intervenes between the *wala*-phrase and the verbal complex that involves the negative marker.

The data presented above suggests that, in addition to c-command, Spec-head agreement should be added to the licensing configurations for NCIs. The availability of Spec-head agreement as a licensing configuration for NCIs can account for the distributional differences between *ħətta*-phrases in Moroccan Arabic and *wala*-phrases in JA. On one hand, *ħətta*-phrases in Moroccan Arabic must be accompanied by an overt negative marker regardless of whether they appear in a post-verbal position or a preverbal position because they are licensed by an overt negative marker in both positions. Post-verbal *ħətta*-phrases check their [uNEG]-feature against the [iNEG]-feature of a negative marker under c-command in the surface syntax as shown in (135); whereas preverbal *ħətta*-phrases check their [uNEG]-feature against the [iNEG]-feature of a negative marker under Spec-head agreement in the surface syntax as shown in (136):

(135) a.*(ma)-ʒa **ħətta** waħəd.
NEG-came NCI-DET one
'No one came.'

b. **ma$_{[iNEG]}$**-ʒa **ħətta$_{[\sout{uNEG}]}$** waħəd

C-command in the surface syntax

(136) a. **ħətta** waħəd *(ma)-ʒa.
NCI-DET one NEG-came
'No one came.'

b. **ħətta$_{[\sout{uNEG}]}$** waħəd ma$_{[iNEG]}$-ʒa

Spec-head agreement in the surface syntax

On the other hand, *wala*-phrases in JA must be accompanied by an overt negative marker only in post-verbal position because they are licensed by an overt negative marker only in post-verbal position. Post-verbal *wala*-phrases check their [uNEG]-feature against the [iNEG]-feature of a

negative marker under c-command in the surface syntax as shown in (137); whereas preverbal *wala*-phrases cannot check their [uNEG]-feature against the [iNEG]-feature of a negative marker because they are not in Spec-head agreement with it in the surface syntax as shown in (138):

(137) a.*(ma)-d͡ʒa **wala** wāħad.
NEG-came.3S NCI-DET one
'No one came.'

b. **ma$_{[iNEG]}$**-d͡ʒa **wala$_{[\sout{uNEG}]}$** wāħad.

C-command in the surface syntax

(138) a. **wala** wāħad (*ma)-d͡ʒa.
NCI-DET one NEG-came.3S
'No one came.'

b. **wala$_{[\sout{uNEG}]}$** wāħad ma$_{[iNEG]}$-d͡ʒa

Spec-head agreement in the surface syntax

Having established that Spec-head agreement should be added to the licensing configurations for NCIs, I will now present data which suggests that Head-complement agreement should also be added to the licensing configurations for NCIs. I will show that Head-complement agreement can account for the rather strange behavior of some NCIs in JA and Moroccan Arabic.

JA and Moroccan Arabic display a set of NCIs that have a rather strange distribution. These include NCIs such as the *not-yet*-words *baʕid* 'not yet' in JA and *baq* 'not yet' in Moroccan Arabic as shown in (139) and (140) respectively below.

(139) a. Nadya **baʕid**-ha *(ma)-d͡ʒat
Nadia NCI-time-her NEG-came.3SF
'Nadia has not come yet.'

b. lə-wlād **baʕid**-hum *(ma)-d͡ʒū.
the-children NCI-time-them NEG-came.3PM
'The children have not come yet.'

(140) a. Nadya **baq**-a *(ma)-ʒat.
Nadia NCI-time-FS NEG-came.3FS
'Nadia has not come yet.'

b. lə-wlad **baq**-yin *(ma)-ʒaw.
the-children NCI-time-P NEG-came.3MP
'The children have not come yet.'

(Moroccan Arabic: Benmamoun 2006: 144)

The distribution of these NCIs constitutes a puzzle for any account that assumes that NCIs can be licensed only through c-command or spec-head agreement. The NCIs in (139) and (140) are clearly not in the c-command domain of the negative marker nor are they in Spec-head agreement with it in the surface syntax. Rather, they are heads c-commanding their negative licenser. The status of these NCIs as heads is supported by the fact that they display all properties of heads in Arabic, such as the ability to host clitics (139) and to agree with the subject (140) (cf. Benmamoun, 2006).

Benmamoun (2006), focusing on head NCIs in Moroccan Arabic, argues that the facts surrounding these NCIs suggest that Head-complement agreement should be added to the licensing configurations for NCIs. Head NCIs are licensed through merger with a complement that involves their negative licenser. He motivates his analysis by showing that head NCIs require a negative marker to be in the clause immediately following them. Consider the following examples from JA.

(141) a. **baʕid**-hum *(ma)-kānu bəʕərfu Nadya.
NCI-time-them NEG-were.3PM know.3PM Nadia
'They had not known Nadia yet.'

b. ??**baʕid**-hum kānu ma-bəʕərfu Nadya.
NCI-time-them were.3PM NEG-know.3PM Nadia
'They had not known Nadia yet.'

We have previously seen that the negative marker can freely cliticize either to the auxiliary verb or to the main verb in sentences that involve both kinds of verbs in JA (cf. example 133 above). However, the sentences in (141) show that the negative marker must cliticize to the auxiliary verb with the presence of head NCIs. This strongly suggests that head NCIs must select for a complement that involves their negative licenser and thus they are licensed through Head-complement agreement. Head NCIs check their [uNEG]-feature against the [iNEG]-feature of a negative marker under Head-complement agreement as shown in the following example:

(142) a. Nadya **baʕid**-ha *(ma)-d͡ʒat.
Nadia NCI-time-her NEG-came.3SF
'Nadia has not come yet.'

b. Nadya **baʕid**$_{[\sout{u}NEG]}$-ha **ma**$_{[iNEG]}$-d͡ʒat
↑ Head-complement agreement

The contrast in (142) above also suggests that an alternative account in terms of c-command, but with a head NCI serving as a Probe and a negative marker serving as a Goal as suggested by Benmamoun (2006), is also not adequate. Such an analysis predicts both sentences in (142) to be grammatical as the head NCI c-commands the negative marker in both sentences, which is not the case.

In sum, I have presented data which strongly suggests that Spec-head agreement and Head-complement agreement should be added to the licensing configurations for NCIs. An NCI can check its [uNEG]-feature against the [iNEG]-feature of a negative marker when it is either c-commanded by or in Spec-head agreement or Head-complement agreement with that negative marker. The availability of Spec-head agreement as a licensing configuration of NCIs has been supported by data from JA and Moroccan Arabic. I have shown that Spec-head agreement can explain the distributional differences between determiner NCIs in the two languages, namely *ħətta*-phrases in Moroccan Arabic and *wala*-phrases in JA. The availability of Head-complement agreement as a licensing configuration of NCIs, on the other hand, has been supported by the rather puzzling distribution of head NCIs in JA and Moroccan Arabic. Head NCIs are neither in the c-command domain of a negative marker nor are they in Spec-head relation with it; however, they are still licensed. Head NCIs must select for a complement that involves their negative licenser and thus they are licensed through Head-complement agreement.

The assumptions I am making here are basically an extension of the proposals of Benmamoun (1997, 2006). Benmamoun shows that the availability of Spec-head agreement as a licensing configuration of NCIs accounts for the distribution of preverbal *ħətta*-phrases in Moroccan Arabic and that the availability of Head-complement agreement as a licensing configuration for NCIs accounts for the distribution of head NCIs in Moroccan. I have shown that Spec-head agreement extends to the distribution of *wala*-phrases in JA and that Head-complement agreement extends to the distribution of head NCIs in JA. However, in his discussion of *ħətta*-phrases and head NCIs in Moroccan Arabic, all that Benmamoun mentions about these elements is that they are NPIs and that Spec-head agreement and Head-complement agreement should be added to the licensing configurations for NPIs. Benmamoun does not

investigate whether *ħətta*-phrases and head NCIs in Moroccan Arabic are NCIs rather than NPIs. In fact, a closer examination of *ħətta*-phrases and head NCIs in Moroccan Arabic shows that they function as NCIs rather than NPIs as evident from the fact that, on par with NCIs cross-linguistically, *ħətta*-phrases and head NCIs in Moroccan Arabic can provide negative fragment answers as shown in the following examples:

(143) A: ʃkun ʃuft?
who saw.3S
'Who did you see?'

B: **ħətta** waħəd.
NCI-DET one
'No one.'

(144) A: lə-wlad ʒaw?
the-children came.3MP
'Have the children arrived?'

B: **baq**-yin.
NCI-time-P
'Not yet.'

These examples show that *ħətta*-phrases and head NCIs in Moroccan Arabic can provide negative fragment answers and thus they should be classified as NCIs rather than NPIs. Consequently, Spec-head agreement and Head-complement agreement should be considered as licensing configurations for NCIs rather than NPIs.

The discussion of the alternative account of NC I am proposing in this subsection has focused so far on data from JA and Moroccan Arabic. I will now show that the proposals I am making about NC extend to other languages. Consider the following data from Polish and Spanish:

(145) a.*(**nie**) wyjechało **żadne** dziecko na wakacje.
NEG went NCI-DET child on holiday
'No child went on holiday.'

b. **Żadne** dziecko *(**nie**) wyjechało na wakacje.
NCI-DET child NEG went on holiday
'No child went on holiday.'

(Polish: Błaszczak 2001: 217)

(146) a.*(No) vino **nadie**.
NEG came NCI-person
'Nobody came.'

b. **Nadie** (*no) vino.
NCI-person NEG came
'Nobody came.'

(Spanish: Laka 1990:104)

The sentences in (145) show that Polish exhibits strict NCIs: NCIs in Polish must be accompanied by a negative marker regardless of whether they appear in a post-verbal position or a preverbal position. The sentences in (146), on the other hand, show that Spanish exhibits non-strict NCIs: NCIs in Spanish must be accompanied by a negative marker only when they appear in a post-verbal position. The combination of a preverbal NCI and a negative marker in Spanish results in a reading with double negation as shown in the following example:

(147) **Nadie** no vino.
NCI-person NEG came
'Nobody did not come.'

.

I argue that the negative marker in both Polish and Spanish is semantically negative thus bearing an [iNEG]-feature. I also argue that NCIs are licensed in the surface syntax rather than at LF in both languages. The distinction between the two languages with regard to NC can be accounted for as follows under the proposals I am making.

NCIs in Polish must be accompanied by a negative marker in both a post-verbal as well as a preverbal position because they are licensed by a negative marker in both positions. Post-verbal NCIs in Polish are clearly in the c-command domain of a negative marker in the surface syntax and thus they check their [uNEG]-feature against the [iNEG]-feature of a negative marker under c-command in the surface syntax as shown in the following example:

(148) a.*(**nie**) wyjechało **żadne** dziecko na wakacje.
NEG went NCI-DET child on holiday
'No child went on holiday.'

(Polish: Błaszczak 2001: 217)

b. **nie**$_{[iNEG]}$ wyjechało **żadne**$_{[\sout{uNEG}]}$ dziecko na wakacje

C-command in the surface syntax

Preverbal NCIs in Polish, on the other hand, are in Spec-head relation with a negative marker and thus they check their [uNEG]-feature against the [iNEG]-feature of that negative marker under Spec-head agreement in the surface syntax as shown in the following example:

(149) a. **Żadne** dziecko *(**nie**) wyjechało na wakacje.
NCI-DET child NEG went on holiday
'No child went on holiday.'

(Polish: Błaszczak 2001: 217)

b. **Żadne**$_{[\sout{uNEG}]}$ dziecko **nie**$_{[iNEG]}$ wyjechało na wakacje.

Spec-head agreement in the surface syntax

Supporting evidence that preverbal NCIs in Polish are in Spec-head agreement with a negative marker comes from the interaction of negative markers with modal verbs in the language. Consider the following contrast:

(150) a. Jan **nie** powinien palić.
John NEG should smoke
'John should not smoke.'

b. Jan powinni **nie** palić.
John should NEG smoke
'John should not smoke.'

(Polish)

(151) a. **Nikt** *(**nie**) powinien palić.
NCI-person NEG should smoke
'No one should smoke.'

b.***Nikt** powinien **nie** palić.
NCI-person should NEG smoke
'No one should smoke.'

(Polish)

The examples in (150) show that the negative marker *nie* in Polish can either precede or follow the modal verb *powinnien*. The examples in (151), on the other hand, show that the presence of a preverbal NCI in Polish poses extra restrictions on the position of a negative marker with regard to modal verbs. When preverbal NCIs are present in Polish the negative marker can only precede the modal verb. This strongly suggests that preverbal NCIs in Polish need to be in Spec-head agreement with a negative marker in the surface syntax. In (151a), the NCI *nikt* is in the domain of the negative marker *nie* (i.e. in Spec-head agreement with it) as nothing intervenes between the two and thus the sentence is grammatical. In (151b), on the other hand, the NCI *nikt* is not in the domain of the negative marker *nie* (i.e. is not in Spec-head agreement with it) as the modal verb intervenes between the two and thus the sentence is ungrammatical.

In contrast to NCIs in Polish, NCIs in Spanish must be accompanied by a negative only when they appear in a post-verbal position because they are licensed by a negative marker only in post-verbal position. Post-verbal NCIs in Spanish are clearly in the c-command domain of a

negative marker in the surface syntax and thus they check their [uNEG]-feature against the [iNEG]-feature of a negative marker under c-command in the surface syntax as shown in the following example:

(152) a.*(No) vino **nadie**.
NEG came NCI-person
'Nobody came.'

(Spanish: Laka 1990:104)

b. **No**$_{\text{[iNEG]}}$ vino **nadie**$_{\text{[}\sout{\text{uNEG}}\text{]}}$

C-command in the surface syntax

Preverbal NCIs in Spanish, on the other hand, cannot be licensed by a negative marker because they are neither in the c-command domain of that negative marker nor in Spec-head agreement with it in the surface syntax. Supporting evidence that preverbal NCIs in Spanish are not in Spec-head agreement with a negative marker comes from the interaction of negative markers with modal verbs in the language. Consider the following contrast:

(153) a. Juan **no** debe hablar Inglés.
John NEG should speak English
'John should not speak English.'

b. Juan debe **no** hablar Inglés.
John should NEG speak English
'John should not speak English.'

(Spanish)

(154) a. **Nadie** (***no)** debe hablar Inglés.
NCI-person NEG should speak English
'No one should speak English.'

b. **Nadie** debe (***no)** hablar Inglés.
NCI-person should NEG speak English
'No one should speak English.'

(Spanish)

The examples in (153) show that, like the case in Polish, a negative marker in Spanish can either follow or precede a modal verb. The examples in (154), on the other hand, show that, unlike the case in Polish, preverbal NCIs in Spanish cannot be licensed by a negative marker regardless of whether a negative marker follows or precedes a modal verb. This strongly suggests that preverbal NCIs in Spanish are not in Spec-head agreement with a negative marker. If preverbal NCIs in Spanish were in Spec-head agreement with a negative marker, we predict sentence (154a) to require the presence of the negative marker because *nadie* seems to be in the domain of the negative marker *no* in this sentence as opposed to sentence (154b) where the modal verb *debe* intervenes between *nadie* and the negative marker *no*.

Following the assumptions I making about NC in this subsection, I argue that preverbal NCIs in Spanish are licensed by an abstract negative operator *Op*¬ and thus the combination of an NCI and a negative marker results in a reading with double negation rather than a concordant reading as shown in the following example:

(155) a. **Nadie** **no** debe hablar Inglés.
NCI-person NEG should speak English
'No one should not speak English.'

b. ***Op***¬$_{[iNEG]}$ **Nadie**$_{[\text{~~uNEG~~}]}$ **no**$_{[iNEG]}$ debe hablar Inglés.
C-command in the surface syntax

The double negation reading associated with sentence (155a) is due to the sentence having two semantic negations: the one associated with *Op*¬ and the one associated with the negative marker *no*.

It is worth pointing out here that a preverbal NCI in Spanish needs to be focused under a double negation reading such the one associated with (155a) above. This strongly suggests that

preverbal NCIs in Spanish are in an A'-position and thus they are not in the domain of the negative marker *no* (i.e. they are not in Spec-head agreement with it) provided that *no* is supposed to be in A-position of the clause (Presumably, Neg^0). The same requirement applies to preverbal *wala*-phrases in JA under a double negation reading. Preverbal *wala*-phrases in JA need to be focally stressed under a double negation reading such as the one illustrated in the following example:

(156) a. **wala** wāħad ma-d͡ʒa.
NCI-DET one NEG-came.3S.
'No one did not come.'

This again lends further support that preverbal *wala*-phrases in JA are in an A'-position and thus they ,as has been previously argued for, are not in the domain of the negative marker *ma-* (i.e. they are not in Spec-head agreement with it) provided that *ma-* is supposed to be in A-position of the clause (Presumably, Neg^0).

All in all, the discussion presented in this subsection has introduced an alternative account of NC. This alternative account is basically a modification of the syntactic agreement account of NC first introduced by Zeijlstra (2004, 2008) and later elaborated on by Penka (2007, 2011). I follow Zeijlstra and Penka in assuming that NCIs are non-negative indefinites endowed with an [uNEG]-feature that needs to be checked against a semantic negation bearing an [i-NEG]-feature in order for the sentence not to crash. I also follow them in assuming that the licensing semantic negation does not need to be overt but rather can be introduced by an abstract negative operator. However, I diverge from them with regard to the negativity features of negative markers in NC-languages, and with regard to the mechanisms under which an NCI can check its [uNEG]-feature. I argue that negative markers are semantically negative in both strict and non-

strict NC-languages. I further argue that an NCI can check its [uNEG]-feature either under c-command, Spec-head agreement, or Head-complement agreement. I also propose that the level of representation at which NC takes place is not the same among all NCIs: while some NCIs are licensed at LF, other NCIs are licensed in the surface syntax. I have shown that this account avoids the problems associated with the previous account and that it can explain the distribution of NCIs in JA and another variety of spoken Arabic, namely Moroccan Arabic. I have also shown that this account extends to other languages such as Polish and Spanish and thus is supposed to work cross-linguistically.

5.4 Summary and Conclusion

This chapter has focused on the licensing conditions of NCIs in JA. It has first introduced the phenomenon of NC and then discussed the licensing of NCIs in JA in light of previous theories of NC in other languages. The discussion of NC in JA has shown that the language provides crucial data with regard to the two varieties of NC discussed in the literature. Previous research on NC suggests that NC-languages should be classified into strict NC-languages and non-strict NC-languages. Strict NC-languages are those with NCIs that need to be accompanied by a negative marker regardless of whether they appear in a post-verbal or a preverbal position. Non-strict NC-languages, on the other hand, are those with NCIs that must be accompanied by a negative marker only when they appear in a post-verbal position; whereas the combination of an NCI and a negative marker yields a reading with double negation, but never a concordant reading. Slavic languages such as Polish are considered to be strict NC-languages as they exhibit strict NCIs; whereas Romance languages such as Italian and Spanish are considered to be non-strict NC-languages as they exhibit non-strict NCIs. Data from JA show that the language exhibits both varieties of NC: while the *never*-words and the *not-yet*-words should be classified

as strict NCIs; the scalar focus particle *wala* should be classified as a non-strict NCI. Thus, JA suggests that a classification of NC as strict and non-strict should apply at the lexical level rather than at the language level.

Four approaches of NC have been introduced and tested against data from JA. The first approach takes NCIs to be non-negative NPIs. The second approach takes NCIs to be negative quantifiers. The third approach takes NCIs to be lexically ambiguous between a non-negative NPI reading and a negative quantifier reading. The last approach takes NCIs to be non-negative indefinites endowed with an uninterpretable [uNEG]-feature that needs to be checked against a matching interpretable [iNEG]-feature. It has been shown that none of these approaches can adequately account for the distribution of NCIs in JA.

The Non-negative NPI Approach fails to capture the distributional differences between NCIs and genuine NPIs in JA. For example, this approach does not account for the fact that NCIs in JA are licensed in only a subset of the contexts that license genuine NPIs in the language. This approach also fails to account for the fact that NCIs in JA seem to be able to express negation on their own in some contexts such as fragment answers whereas genuine NPIs do not do so.

The Negative Quantifier Approach is problematic for two reasons. First, it fails to account for the fact that NCIs do not express negation on their own in different contexts, for instance when they are accompanied by a negative marker. Second, it fails to account for the distributional differences between NCIs and genuine negative quantifiers in double negation languages such as Standard English, Dutch, and German.

The ambiguity hypothesis inherits problems from both the non-negative NPI approach and the negative quantifier approach. In particular, this hypothesis fails to account for the

distributional differences between NCIs and genuine NPIs, on one hand, and between NCIs and genuine negative quantifiers, one the other hand.

Finally, the Non-negative Indefinite Approach fares better than all previous approaches of NC. This approach proposes that NCIs are neither NPIs nor negative quantifiers, but are rather non-negative indefinites endowed with an [uNEG]-feature that needs to be checked against a matching [iNEG]-feature in order for the sentence not to crash. However, this approach suffers two major problems. First, this approach takes NCIs to be markers of sentential negation that can be covert in the clause thus rendering negative markers redundant in the clause, which is not the case. In fact, negative markers are obligatory in the majority of contexts with NCIs in NC-languages. Second, this approach assigns negative markers in strict NC-languages and non-strict NC-languages different negativity features and thus faces a problem with regard to languages like JA which exhibit both varieties of NC at the same time.

Alternatively, an account of NC was proposed that is basically a modification of the Non-negative Indefinites Approach. I adopted the idea that NCIs are non-negative indefinites endowed with an [uNEG]-feature that needs to be checked against the [iNEG]-feature of a semantic negation that can be covert in the clause. However, I have made it clear that under this account negative markers are semantically negative in all NC-languages thus avoiding the problems with the original proposals of the Non-negative Indefinites Approach. I have also proposed that Spec-head agreement and Head-complement agreement exist side by side with c-command as licensing configurations for NCIs. I have further argued that the level of representation at which NC takes place is not the same among all NCIs. In particular, I have argued that while some NCIs are licensed at LF, other NCIs are licensed in the surface syntax. I have shown that this alternative account of NC can explain the distribution of NCIs in JA and

another variety of spoken Arabic, namely Moroccan Arabic. I have also shown that this account extends to other NC-languages such as Polish (a language with strict NCIs) and Spanish (a language with non-strict NCIs) and is thus supposed to work cross-linguistically.

Chapter Six

Summary, Conclusion, and Implications

6.1 Summary of the Study

The current study aimed at investigating the licensing conditions on NSIs in JA. To this end, I have reviewed expressions that function as NSIs in JA and investigated their distribution in the language. JA exhibits both types of NSIs: NPIs and NCIs. The negative-fragment-answer-diagnostic has been used to tease apart NPIs and NCIs in JA. The etymology of both NPIs and NCIs in JA shows that these expressions derive from maximal-unit and minimal-unit expressions that give rise to scalar implications, just like the case in other languages. Although NPIs and NCIs in JA seem to form a natural class in the sense that they display a certain affinity to negation, they show a number of distributional difference that call for different analyses. First, NCIs seem to be able to express negation on their own as is the case in fragment answers; whereas NPIs do not. Second, the licensing of NCIs is clause-bound; whereas the licensing of NPIs is not. Third, NPIs are acceptable in a number of negative-like contexts; whereas NCIs are acceptable in only subset of these contexts, namely *without*-clauses and *before*-clauses.

The licensing of NPIs in JA has been discussed in light of previous approaches to NPI licensing. These approaches include the Surface Structure Approach of Lasnik (1975) and Jackendoff (1969, 1972), the Downward Entailment Approach of Ladusaw (1980, 1982, 1983), the Negative Implicature Approach of Linebarger (1981, 1987), the Binding Approach of Progovac (1988, 1993, 1994), and the (Non-)veridicality Approach of Giannakidou (1998, 1999, 2000, 2002, 2006, 2011). The discussion has shown that the (Non)-veridicality Approach fares better than all other approaches in accounting for the distribution of NPIs in JA. Data from JA

show that NPIs in the language need to be in the c-command domain of a non-veridical function at LF as proposed by the (Non)-veridicality Approach.

The licensing of NCIs in JA has also been discussed in light of previous approaches to NCI licensing. These approaches include the Non-negative NPI Approach (Laka 1990; van der Wouden 1997; Zwarts 1997, 1998; Progovac 1988, 1993, 1994; Giannakidou 1998, 2000, 2006), the Negative Quantifier Approach (Zanuttini 1991; Haegeman and Zanuttini 1991, 1996; Haegeman 1995; de swart and Sag 2002; Watanabe 2004), the Ambiguity Approach (Herburger 2001; Hoyt 2010), and the Non-negative Indefinites Approach (Zeijlstra 2004, 2008; Penka 2007, 2011). The discussion has shown that none of these approaches can account for the distribution of NCIs in JA. For this, an alternative account has been proposed that is basically a crucial modification of the Non-negative Indefinites Approach. I have argued that NCIs are non-negative indefinites that are endowed with a [uNEG]-feature that needs to be checked against an [iNEG]-feature of a semantic negation that can be either overt or abstract in the clause. I have also proposed that Spec-head agreement and Head-complement agreement exist side by side with c-command as licensing configurations for NCIs. I have further argued that the level of representation at which NCI licensing takes place is not the same among all NCIs: while some NCIs are licensed at LF, other NCIs are licensed in the surface syntax. I have shown that this alternative account can capture the distribution of NCIs in JA. I have also shown that this account extends to NCIs in other languages such as Moroccan Arabic, Polish, and Spanish and is thus supported cross-linguistically.

6.2 Conclusion of the Study

The discussion of NPI licensing and NCI licensing in JA presented in this study concludes that NPIs and NCIs display important distributional differences in the language and thus they represent different phenomena that call for different analyses. The distribution of NPIs in JA can best be captured by the semantic theory of (Non-)veridicalty (Giannakidou 1998, 1999, 2000, 2002, 2006, 2011); whereas the distribution of NCIs in the language can best be captured by the Non-negative Indefinite Approach (Zeijlstra 2004, 2008; Penka 2007, 2011) under some crucial modifications.

6.3 Implications of the Study

The current study has important implications for some controversial issues in the study of linguistics. One important implication of the current study for the study of linguistics is that it has provided further evidence that Head-complement agreement is a licensing relation a long with Spec-head relation and c-command. Head-complement agreement has been shown to account for the distribution of head NCIs in JA and Moroccan Arabic (cf. Benmamoun 2006). It has previously been claimed in the literature that Head-complement agreement exists as a checking relation along with Spec-head agreement and c-command (Benmamoun 2006, Epstein et al. 1998, Bobaljik and Thráinsson 1998). For example, Bobaljik and Thráinsson (1998) argue that the checking requirement involving T and V in English can be carried out through Head-complement agreement without movement.

The current study also has important implications for some controversial issues in the study of Arabic linguistics. These include the status of preverbal subjects in the SVO word order and the structure of focus-fronting constructions and clitic-left dislocation constructions in the language. The status of preverbal subjects in Arabic is still debatable: while some argue that

preverbal subjects in Arabic are real subjects that are located in the A-domain of the clause (the Subject Hypothesis), others argue that they are topics located in the A'-domain of the clause (the Topic Hypothesis). The data presented in this study argue against a unified analysis of preverbal subjects in Arabic as either real subjects or topics and suggests instead that preverbal subjects behave as real subjects in some varieties of Arabic, namely Moroccan Arabic; whereas they behave as topics in others, namely JA (cf. Hoyt 2011). In particular, the distribution of *ħətta*-phrases in Moroccan Arabic and *wala*-phrases in JA which function as NCIs in the languages has shown that preverbal subject *ħətta*-phrases are in Spec-head relation with the verbal complex that involves a negative marker suggesting that they are real subjects that are located in the A-domain of the clause; whereas preverbal subject *wala*-phrases in JA are not in Spec-head relation with the verbal complex that involves a negative marker suggesting that they are topics that are located in the A'-domain of the clause.

The structure of focus-fronting constructions and clitic-left dislocation constructions in Arabic has also received a lot of debate in the literature. The question surrounding these constructions is whether they are derived by movement or base-generation. The distribution of NSIs in JA presented in this study supports the Minimalist Split-CP hypothesis (Aoun and Benmamoun 1998; Aoun et al. 2010) which proposes that focus-fronting constructions and clitic-left dislocation constructions that do not involve islands are derived by movement; whereas clitic-left dislocation constructions that involve islands are derived by base-generation. In particular, we have seen that NPIs in JA are acceptable only in focus-fronting constructions and clitic-left dislocation constructions that do not involve islands, but not in clitic-left dislocation construction that involve islands. These distributional patterns of NPIs in JA follow immediately if we assume a movement analysis of focus-fronting constructions and clitic-left dislocation

constructions that do not involve islands, but a base-generation analysis of clitic-left dislocation constructions that involve islands as proposed by the Minimalist Split-CP hypothesis. We have also seen that only NCIs that are licensed at LF as opposed to those that are licensed in the surface syntax can participate in focus-fronting constructions and clitic-left dislocation constructions that do not involve islands. This again supports a movement analysis of these constructions as proposed by the Minimalist Split-CP hypothesis.

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